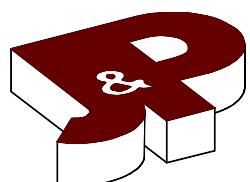




CITY OF LONGVIEW, TEXAS
2002 MAPPING & MONUMENTATION PROJECT.
HORIZONTAL & VERTICAL CONTROL NETWORK.

**LONGVIEW CITY LIMITS AND
EXTRATERRITORIAL JURISDICTION,
GREGG, UPSHUR, HARRISON AND
RUSK COUNTIES**



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JOB NUMBER 1994-001 DATE: APRIL 2002

April 15, 2002

SURVEYORS REPORT:

OUR JOB NUMBER 1994-001
2002 GPS HORIZONTAL & VERTICAL CONTROL SURVEY
CITY OF LONGVIEW, TEXAS.

SURVEYING FIRM: Johnson & Pace, Engineering & Surveying Consultants, 430 North Center Street, Longview, TX 75601, Project supervision by Lonnie C. Pace, II, Professional Land Surveyor, Texas Registration No. 1573.

CLIENT: The Survey was performed for the City of Longview, Texas, under a subcontract with MD Atlantic Technologies, Inc., 2227 Drake Avenue SW, Building 14, Huntsville, Alabama, 35805, Telephone: 256-882-7788, (MD Atlantic) Project Management by Chris Jaeger.

PROJECT LOCATION: The primary area of concern was the Extraterritorial Jurisdiction (ETJ) of the City of Longview, Texas.

PURPOSE: The Survey was performed to establish thirty-one (31) CITY SURVEY MARKERS (CSM's) in the Longview ETJ for two purposes, 1. To provide horizontal and vertical control for aerial mapping of the ETJ, and 2. To provide horizontal and vertical control for Conventional Surveying.

EQUIPMENT: Two types of GPS surveying were performed in the scope of this project, "Static GPS" and "Airborne GPS Control"(ABGPS). The Static surveying was performed "Ashtech Locus" and "Ashtech ProMark II" single frequency GPS units. The ABGPS was performed using "Leica 530" and "Trimble 4000SSE" dual frequency GPS units.

HORIZONTAL DATUM: This Survey is based upon the Texas Coordinate System of 1983, North Central Zone, and referenced (constrained) to National Geodetic Survey (NGS) Stations: "FAA GGG A" (PID AB2804) at Gregg County Airport, "FAA 07F a 1994" (PID AB2798) at Gladewater Municipal Airport, "4F4 A 1994" (PID AB2783) at Gilmer-Upshur County Airport, "FAA ASL A 1994" (PID AB2800) at Harrison County Airport, and "FAA F12 A 1994" (PID AB2804) at Rusk County Airport. (Sketches attached)

VERTICAL DATUM: This Survey is based upon the North American Vertical Datum of 1988 (NAVD 88) and constrained (referenced) to NGS Station "E-160" located at the Gregg County Courthouse (Sketch attached)

SPECIFICATIONS: MD Atlantic specified that the work be performed to Order 2-Standards, that is a Line Length Dependent Error maximum of 1 part in 50,000, (1:50,000) and considering that the end product was to be maps at a scale of 1 inch equals 100 feet (1"=100') with contours at 2 foot intervals, the vertical positions were to be accurate with a tolerance of +/- one tenth of a foot (0.10') to a 95% confidence level.

PROJECT SUMMARY:

The GPS Survey was conducted in three phases, Primary Control, ETJ Control, and Azimuth Control.

Primary Control Network:

Johnson & Pace had previously established a Horizontal and Vertical Control Network connecting the NGS Stations previously cited in "Horizontal Datum" and this project required such a network as its basis. One control site requested in this contract was located very close to one of our established markers in the Hallsville, Texas area, so we replaced our marker with CSM 1211 and reran the GPS Survey on this network for use as Primary Control. The Network Relative Accuracy for this GPS network ranged from a low of 1part in 603,000 Horizontal, and 1 part in 474,000 Vertical, to a high of 1part in 1,223,000 Horizontal and 1part in 989,000 Vertical.

ETJ Control Network:

The positions established in the Primary Control Network for markers CSM 1211, 0105 (FAA GGG A), 0102, 0104 and 0115 were held to constrain a GPS network which encompassed the City of Longview ETJ and established CSM's at thirty one (31) locations selected by MD Atlantic. The Network Relative Accuracy for this GPS network ranged from a low of 1part in 477,000 Horizontal, and 1part in 301,000 Vertical, to a high of 1part in 2,300,000 Horizontal and 1 part in 1,541,000 Vertical.

Azimuth Control Networks:

The positions established in the Primary and ETJ Control networks were held to constrain GPS networks which established Azimuth (Reference) CSM's as companion markers near each of the CSM's established in the ETJ Control network. The Network Relative Accuracy for these GPS networks ranged from a low of 1part in 106,000 Horizontal, and 1part in 53,000 Vertical, to a high of 1part in 3,205,000 Horizontal and 1 part in 2,523,000 Vertical. (The low ratios occurred on a short vector with a length of 2200 feet, which produced probable errors of 0.02 foot horizontal and 0.04 foot vertical)

VERTICAL STATEMENT:

The Published NGS Data Sheets for the Stations listed in "Horizontal Datum" contain the following Note.

"GPS derived orthometric heights for airport stations designated as Primary Airport Control Stations or Secondary Airport Control Stations are published to 2 decimal places. This maintains centimeter relative accuracy between the PACS and SACS. It does not indicate centimeter accuracy relative to other marks which are part of the NAVD 88 network."

Therefore based upon NGS Station E-160, (published elevation = 355.32) we set a control point (#0132) near the Gregg County Courthouse on the grounds of the Gregg County Jail with an elevation of 375.02 feet established by conventional Surveying methods. The ETJ Control Network vertical value for this point was 375.10 feet, a variance of 0.08 foot, which is within the specified tolerance of +/- 0.10 foot. As such we can certify that all of the Control Networks in this project are based upon NAVD 88.

CONCLUSION: Attached are the following:

- A. Data Sheets for NGS Control Markers.
- B. Printouts of Geodetic Positions, Texas Coordinate System of 1983, North Central Zone, Grid Positions, and Network Relative Accuracy Computations for the various Control networks.
- C. Photographs for City Survey Markers and Johnson & Pace Markers.
- D. Data Sheets (Sketches) or City Survey Markers and Johnson & Pace Markers.



Lonnie C. Pace, II
Professional Land Surveyor
Texas Registration No. 1573





TYPICAL "CITY SURVEY MARKER"
5/8" X 5' REBAR SET IN " X 2' CONCRETE PILLAR
WITH 3-1/4" DOMED ALUMINUM CAP

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CITY SURVEY MARKER DATA SHEETS (NOT NUMBERED)

(JOHNSON & PACE POINT No. 0101)

STATION FAA 07F A 1994 - GLADEWATER MUNICIPAL AIRPORT

National Geodetic Survey, Retrieval Date = MAY 3, 2001

AB2798

AB2798 PACS - This is a Primary Airport Control Station.

AB2798 DESIGNATION - FAA 07F A 1994

AB2798 PID - AB2798

AB2798 STATE/COUNTY- TX/GREGG

AB2798 USGS QUAD - GLADEWATER (1960)

AB2798

*CURRENT SURVEY CONTROL

AB2798

AB2798*	NAD 83(1993)-	32 31 34.13033 (N)	094 57 56.79070 (W)	ADJUSTED
AB2798*	NAVD 88	87.46 (meters)	286.9 (feet)	GPS OBS

AB2798

AB2798 X - -465,953.000 (meters) COMP

AB2798 Y - -5,362,760.154 (meters) COMP

AB2798 Z - 3,409,801.155 (meters) COMP

AB2798 LAPLACE CORR- 0.09 (seconds) DEFLEC99

AB2798 ELLIP HEIGHT- 61.04 (meters) GPS OBS

AB2798 GEOID HEIGHT- -26.34 (meters) GEOID99

AB2798

AB2798 HORZ ORDER - B

AB2798 ELLP ORDER - FOURTH CLASS II

AB2798

AB2798.This mark is at Gladewater Muni (07F) Airport (07F)

AB2798

AB2798.The horizontal coordinates were established by GPS observations

AB2798.and adjusted by the National Geodetic Survey in February 1996.

AB2798

AB2798.The orthometric height was determined by GPS observations and a

AB2798.high-resolution geoid model.

AB2798

AB2798.GPS derived orthometric heights for airport stations designated as

AB2798.PACS or SACS are published to 2 decimal places. This maintains

AB2798.centimeter relative accuracy between the PACS and SACS. It does

AB2798.not indicate centimeter accuracy relative to other marks which are

AB2798.part of the NAVD 88 network.

AB2798

AB2798. X, Y, and Z were computed from the position and the ellipsoidal ht.

AB2798

AB2798.The Laplace correction was computed from DEFLEC99 derived deflections.

AB2798

AB2798.The ellipsoidal height was determined by GPS observations

AB2798.and is referenced to NAD 83.

AB2798

AB2798.The geoid height was determined by GEOID99.

AB2798

	North	East	Units	Scale	Converg.
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AB2798;SPC TXNC	- 2,100,892.626	931,947.812	MT	0.99991439	+1 55 39.2
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AB2798;UTM 15	- 3,600,460.932	315,374.764	MT	1.00002034	-1 03 26.2
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AB2798

AB2798 SUPERSEDED SURVEY CONTROL
AB2798
AB2798 ELLIP HT - 61.09 (m) GP() 1 1
AB2798
AB2798.Superseded values are not recommended for survey control.
AB2798.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
AB2798.See file dsdata.txt to determine how the superseded data were derived.
AB2798
AB2798_MARKER: I = METAL ROD
AB2798_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
AB2798_STAMPING: FAA 07F A 1994
AB2798_PROJECTION: FLUSH
AB2798_MAGNETIC: I = MARKER IS A STEEL ROD
AB2798_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
AB2798_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR
AB2798+SATELLITE: SATELLITE OBSERVATIONS - 1994
AB2798_ROD/PIPE-DEPTH: 8.4 meters
AB2798_SLEEVE-DEPTH : 0.90 meters
AB2798
AB2798 HISTORY - Date Condition Recov. By
AB2798 HISTORY - 1994 MONUMENTED NGS
AB2798
AB2798 STATION DESCRIPTION
AB2798
AB2798'DESCRIBED BY NATIONAL GEODETIC SURVEY 1994 (AJL)
AB2798'THE STATION IS LOCATED ABOUT 2.5 KM (1.55 MI) SOUTHWEST OF GLADEWATER
AB2798'AT THE GLADEWATER MUNICIPAL AIRPORT, IN GRASS ADJACENT TO A DRAINAGE
AB2798'DITCH IN THE SOUTHEAST CORNER OF THE AIRFIELD AND ALONG THE ENTRANCE
AB2798'ROAD. OWNERSHIP--CITY OF GLADEWATER, C/O SHARON JOHNSON, P.O. BOX
AB2798'551, GLADEWATER, TX 75647. PHONE 903-845-2196. TO REACH FROM THE
AB2798'JUNCTION OF U.S. HIGHWAY 271 AND STATE HIGHWAY 135, ABOUT 3 KM (1.85
AB2798'MI) SOUTHWEST OF GLADEWATER, GO NORTHEAST ON HIGHWAY 271 FOR 0.6 KM
AB2798'(0.35 MI) TO THE AIRPORT ENTRANCE ROAD ON THE LEFT. TURN LEFT, NORTH,
AB2798'ON ENTRANCE ROAD FOR 0.07 KM (0.05 MI) TO THE STATION ON THE LEFT.
AB2798'THE STATION MARK IS A PUNCH HOLE TOP CENTER OF A STAINLESS STEEL ROD
AB2798'IN A GREASE FILLED SLEEVE 90 CM LONG ENCASED IN A 12.7 CM PVC PIPE
AB2798'WITH A LOGO CAP SURROUNDED BY CONCRETE SET FLUSH WITH THE GROUND. IT
AB2798'IS 74.1 M (243.1 FT) NORTHWEST OF THE CENTER OF THE HIGHWAY, 37.2 M
AB2798'(122.0 FT) NORTHWEST OF THE NORTH LEG OF THE AIRPORT SIGN, ABOUT 15 M
AB2798'(49.2 FT) SOUTHEAST OF THE DITCH, 12.1 M (39.7 FT) SOUTHWEST OF THE
AB2798'CENTER OF THE ENTRANCE ROAD, AND 1.0 M (3.3 FT) NORTHEAST OF A
AB2798'FIBERGLASS WITNESS POST. DESCRIBED BY D.G. AUG

(JOHNSON & PACE POINT No. 0103)

NGS STATION: 4F4 A 1994 – GILMER-UPSHUR COUNTY AIRPORT

National Geodetic Survey, Retrieval Date = MAY 3, 2001

AB2783

AB2783 PACS - This is a Primary Airport Control Station.

AB2783 DESIGNATION - 4F4 A 1994

AB2783 PID - AB2783

AB2783 STATE/COUNTY- TX/UPSHUR

AB2783 USGS QUAD - GILMER (1978)

AB2783

AB2783 *CURRENT SURVEY CONTROL

AB2783

AB2783*	NAD 83(1993)-	32 42 11.99241 (N)	094 56 54.90254 (W)	ADJUSTED
AB2783*	NAVD 88 -	126.03 (meters)	413.5 (feet)	GPS OBS

AB2783

AB2783 X -	-463,433.135 (meters)	COMP
AB2783 Y -	-5,352,380.628 (meters)	COMP
AB2783 Z -	3,426,372.941 (meters)	COMP
AB2783 LAPLACE CORR-	-0.20 (seconds)	DEFLEC99
AB2783 ELLIP HEIGHT-	99.50 (meters)	GPS OBS
AB2783 GEOID HEIGHT-	-26.47 (meters)	GEOID99

AB2783

AB2783 HORZ ORDER - B

AB2783 ELLP ORDER - FOURTH CLASS II

AB2783

AB2783.This mark is at Gilmer-Upshur Co (4F4) Airport (4F4)

AB2783

AB2783.The horizontal coordinates were established by GPS observations

AB2783.and adjusted by the National Geodetic Survey in February 1996.

AB2783

AB2783.The orthometric height was determined by GPS observations and a
AB2783.high-resolution geoid model.

AB2783

AB2783.GPS derived orthometric heights for airport stations designated as
AB2783.PACS or SACS are published to 2 decimal places. This maintains
AB2783.centimeter relative accuracy between the PACS and SACS. It does
AB2783.not indicate centimeter accuracy relative to other marks which are
AB2783.part of the NAVD 88 network.

AB2783

AB2783. X, Y, and Z were computed from the position and the ellipsoidal ht.

AB2783

AB2783.The Laplace correction was computed from DEFLEC99 derived deflections.

AB2783

AB2783.The ellipsoidal height was determined by GPS observations

AB2783.and is referenced to NAD 83.

AB2783

AB2783.The geoid height was determined by GEOID99.

AB2783

	North	East	Units	Scale	Converg.
AB2783;SPC TXNC	- 2,120,583.200	932,897.792	MT	0.99989098	+1 56 12.9
AB2783;UTM 15	- 3,620,077.472	317,349.885	MT	1.00001138	-1 03 11.1

AB2783

AB2783 -----				
AB2783 PID Reference Object		Distance	Geod. Az	
AB2783			dddmmss.s	
AB2783 CR1361 GILPORT		394.135 METERS	18018	
AB2783 -----				
AB2783				
AB2783	SUPERSEDED SURVEY CONTROL			
AB2783				
AB2783 ELLIP HT -	99.55 (m)		GP()	1 1
AB2783				
AB2783.Superseded values are not recommended for survey control.				
AB2783.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.				
AB2783.See file dsdata.txt to determine how the superseded data were derived.				
AB2783				
AB2783_MARKER: I = METAL ROD				
AB2783_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)				
AB2783_STAMPING: 4F4 A 1994				
AB2783_PROJECTION: FLUSH				
AB2783_MAGNETIC: I = MARKER IS A STEEL ROD				
AB2783_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL				
AB2783_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR				
AB2783+SATELLITE: SATELLITE OBSERVATIONS - 1994				
AB2783_ROD/PIPE-DEPTH: 8.6. meters				
AB2783_SLEEVE-DEPTH : 0.90 meters				
AB2783				
AB2783 HISTORY - Date Condition Recov. By				
AB2783 HISTORY - 1994 MONUMENTED NGS				
AB2783				
AB2783 STATION DESCRIPTION				
AB2783				
AB2783'DESCRIBED BY NATIONAL GEODETIC SURVEY 1994 (AJL)				
AB2783'THE STATION IS LOCATED ABOUT 3 KM (1.85 MI) SOUTH OF GILMER, AT THE				
AB2783'GILMER-UPSHUR COUNTY AIRPORT, IN THE CENTER OF THE NORTHEND OF THE				
AB2783'GRASS ISLAND OF THE TURN AROUND AT RUNWAY END 17. OWNERSHIP--CITY OF				
AB2783'GILMER, BOX 760, GILMER, TX 75644. CITY MANAGER IS TIM GUMP. PHONE				
AB2783'903-843-2552. TO REACH FROM THE JUNCTION OF U.S. HIGHWAY 271 AND				
AB2783'STATE HIGHWAY 155 ON THE SOUTH SIDE OF GILMER, GO SOUTH ON U.S.				
AB2783'HIGHWAY 271 FOR 1.1 KM (0.70 MI) TO THE AIRPORT ENTRANCE ROAD ON THE				
AB2783'RIGHT (AVIATION DRIVE) . TURN RIGHT, TURN RIGHT, WEST, ON THE				
AB2783'ENTRANCE ROAD FOR 0.4 KM (0.25 MI) TO A GATE. PASS THROUGH GATE,				
AB2783'WEST, FOR 0.16 KM (0.10 MI) CROSSING APRON AND ALONG TAXI TO THE				
AB2783'RUNWAY. TURN RIGHT, NORTH, ALONG RUNWAY FOR 0.41 KM (0.25 MI) TO THE				
AB2783'STATION ON THE RIGHT. THE STATION IS A PUNCH HOLE TOP CENTER OF A				
AB2783'STAINLESS STEEL ROD IN A 2.5 CM GREASE FILLED SLEEVE 90 CM LONG				
AB2783'ENCASED IN A 12.7 CM PVC PIPE WITH A LOGO CAP SURROUNDED BY CONCRETE				
AB2783'SET FLUSH WITH THE GROUND. IT IS 22.7 M (74.5 FT) EAST OF THE CENTER				
AB2783'OF THE RUNWAY, 22.1 M (72.5 FT) WEST OF THE CENTER OF THE TURN AROUND,				
AB2783'16.9 M (55.4 FT) SOUTH OF THE CENTER OF THE CONNECTOR, 11.5 M (37.7				
AB2783'FT) SOUTHWEST OF THE CENTER OF A CONCRETE PAD FOR A CABLE LINE, AND				
AB2783'0.4 M (1.3 FT) WEST OF A FIBERGLASS WITNESS POST. DESCRIBED BY D.G.				
AB2783'AUG				

(JOHNSON & PACE POINT No. 0105)

NGS STATION FAA GGG A - GREGG COUNTY AIRPORT

National Geodetic Survey, Retrieval Date = MAY 3, 2001

AB2804

AB2804 PACS - This is a Primary Airport Control Station.
AB2804 DESIGNATION - FAA GGG A
AB2804 PID - AB2804
AB2804 STATE/COUNTY- TX/GREGG
AB2804 USGS QUAD - LAKEPORT (1983)

AB2804

*CURRENT SURVEY CONTROL

AB2804

AB2804* NAD 83(1993)- 32 23 35.35432 (N) 094 42 10.17601 (W) ADJUSTED
AB2804* NAVD 88 - 108.47 (meters) 355.9 (feet) GPS OBS

AB2804

AB2804 X - -441,987.207 (meters) COMP
AB2804 Y - -5,372,748.711 (meters) COMP
AB2804 Z - 3,397,368.169 (meters) COMP
AB2804 LAPLACE CORR- 0.12 (seconds) DEFLEC99
AB2804 ELLIP HEIGHT- 82.10 (meters) GPS OBS
AB2804 GEOID HEIGHT- -26.27 (meters) GEOID99

AB2804

AB2804 HORZ ORDER - B

AB2804 ELLP ORDER - FOURTH CLASS II

AB2804

AB2804.This mark is at Gregg Co (GGG) Airport (GGG)

AB2804

AB2804.The horizontal coordinates were established by GPS observations
AB2804.and adjusted by the National Geodetic Survey in February 1996.

AB2804

AB2804.The orthometric height was determined by GPS observations and a
AB2804.high-resolution geoid model.

AB2804

AB2804.GPS derived orthometric heights for airport stations designated as
AB2804.PACS or SACS are published to 2 decimal places. This maintains
AB2804.centimeter relative accuracy between the PACS and SACS. It does
AB2804.not indicate centimeter accuracy relative to other marks which are
AB2804.part of the NAVD 88 network.

AB2804

AB2804. X, Y, and Z were computed from the position and the ellipsoidal ht.
AB2804

AB2804.The Laplace correction was computed from DEFLEC99 derived deflections.

AB2804

AB2804.The ellipsoidal height was determined by GPS observations
AB2804.and is referenced to NAD 83.

AB2804

AB2804.The geoid height was determined by GEOID99.

AB2804

AB2804;	North	East	Units	Scale	Converg.
AB2804;SPC TXNC	- 2,087,016.829	957,167.474	MT	0.99993818	+2 04 15.4
AB2804;UTM 15	- 3,585,290.452	339,838.901	MT	0.99991633	-0 54 44.8

AB2804

AB2804:	Primary Azimuth Mark	Grid Az
AB2804:SPC TXNC	- FAA GGG C	219 23 32.6
AB2804:UTM 15	- FAA GGG C	222 22 32.8
AB2804 PID	Reference Object	Distance Geod. Az ddmmss.s
AB2804		
AB2804 AB6207	FAA GGG C	APPROX. 1.3 KM 2212748.0
AB2804 AB6206	FAA GGG B	APPROX. 1.4 KM 2425956.5
AB2804 -----		
AB2804	SUPERSEDED SURVEY CONTROL	
AB2804		
AB2804 ELLIP HT	-	82.15 (m) GP() 1 1
AB2804		
AB2804.Superseeded values are not recommended for survey control.		
AB2804.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.		
AB2804.See file dsdata.txt to determine how the superseded data were derived.		
AB2804		
AB2804_MARKER: DH = HORIZONTAL CONTROL DISK		
AB2804_SETTING: 36 = VALVE VAULT		
AB2804_STAMPING: FAA GGG A 1994		
AB2804_MAGNETIC: N = NO MAGNETIC MATERIAL		
AB2804_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL		
AB2804_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR		
AB2804+SATELLITE: SATELLITE OBSERVATIONS - March 07, 1997		
AB2804		
AB2804 HISTORY	- Date	Condition Recov. By
AB2804 HISTORY	- 1994	MONUMENTED NGS
AB2804 HISTORY	- 19970307	GOOD NGS
AB2804		
AB2804	STATION DESCRIPTION	
AB2804		
AB2804'DESCRIBED BY NATIONAL GEODETIC SURVEY 1994 (AJL)		
AB2804'THE STATION IS LOCATED ABOUT 7 KM (4.35 MI) SOUTH OF LONGVIEW AT THE		
AB2804'GREGG COUNTY AIRPORT, JUST INSIDE THE PERIMETER FENCE IN THE NORTHEAST		
AB2804'CORNER OF THE AIRFIELD, AND ALONG AN ACCESS ROAD TO THE AIRFIELD.		
AB2804'OWNERSHIP--GREGG COUNTY AIRPORT, HIGHWAY 322, LONGVIEW, TX 75603.		
AB2804'AIRPORT MANAGER IS BUCKEY WALTERS. PHONE 903-643-3031. CONTACT HIM		
AB2804'ONE DAY IN ADVANCE FOR PERMISSION TO OCCUPY THIS STATION. TO REACH		
AB2804'FROM THE OVERPASS AT THE JUNCTION OF INTERSTATE HIGHWAY 20 AND STATE		
AB2804'HIGHWAY 322 (EXIT 595) ON THE SOUTH OF LONGVIEW, GO SOUTH ON HIGHWAY		
AB2804'322 FOR 3.44 KM (2.15 MI) TO A PAVED ROAD RIGHT JUST AFTER CROSSING		
AB2804'THE SABINE RIVER. TURN RIGHT, SOUTHWEST, ON HIGHWAY 322 FOR 2.25 KM		
AB2804'(1.40 MI) TO A PAVED ROAD LEFT. TURN LEFT, EAST, ON FARM ROAD 349 FOR		
AB2804'1.87 KM (1.15 MI) TO A PAVED ROAD RIGHT. TURN RIGHT, SOUTH, ON JERRY		
AB2804'LUCY ROAD FOR 0.18 KM (0.10 MI) TO THE STATION ON THE RIGHT AFTER THE		
AB2804'SOUTH ONE OF TWO GATES. STATION IS SET FLUSH NEAR THE CENTER OF THE		
AB2804'TOP OF A 1.8 M (5.9 FT) DIAMETER CONCRETE FOUNDATION OF A MANHOLE		
AB2804'COVER PROJECTING 20 CM. IT IS 14.2 M (46.6 FT) WEST OF THE CENTER OF		
AB2804'JERRY LUCY ROAD, 13.8 M (45.3 FT) SOUTH OF THE CENTER OF THE ACCESS		
AB2804'ROAD, 11.8 M (38.7 FT) SOUTHWEST OF THE SOUTH GATE POST OF THE SOUTH		
AB2804'ONE OF TWO GATES, 0.4 M (1.3 FT) NORTHEAST OF THE NORTHEAST EDGE OF A		
AB2804'MANHOLE COVER, AND 6.1 M (20.0 FT) WEST OF A FIBERGLASS WITNESS POST.		
AB2804'DESCRIBED BY D.G. AUG		

AB2804

STATION RECOVERY (1997)

AB2804

AB2804'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 1997 (AJL)

AB2804'RECOVERY NOTE BY NATIONAL GEODETIC SURVEY 07 MAR 1997 (WCW) .

AB2804'RECOVERED IN GOOD CONDITION AS DESCRIBED WITH CHANGES. THE STATION IS

AB2804'SET INTO THE TOP OF A PREFABRICATED CONCRETE VALVE VAULT. THE VAULT

AB2804'IS 1.8 M (5.9 FT) DIAMETER, 1.5 M (4.9 FT) DEEP TO GRAVEL FLOOR, AND

AB2804'THE TOP SLAB IS 0.3 M (1.0 FT) THICK. THE STATION IS LOCATED 19.1 M

AB2804'(62.7 FT) WEST OF JERRY LUCY ROAD CENTER. NOTE--THIS IS A PRIMARY

AB2804'AIRPORT CONTROL STATION (PACS) .

(JOHNSON & PACE POINT No. 0112)

NGS STATION FAA ASL A 1994 - HARRISON COUNTY AIRPORT

National Geodetic Survey, Retrieval Date = MAY 3, 2001

AB2800

AB2800 FBN - This is a Candidate for Federal Base Network Control.
AB2800 PACS - This is a Primary Airport Control Station.
AB2800 DESIGNATION - FAA ASL A 1994
AB2800 PID - AB2800
AB2800 STATE/COUNTY- TX/HARRISON
AB2800 USGS QUAD - MARSHALL EAST (1978)

AB2800

*CURRENT SURVEY CONTROL

AB2800

AB2800*	NAD 83(1993)-	32 31 13.75733 (N)	094 18 41.05096 (W)	ADJUSTED
AB2800*	NAVD 88	106.36 (meters)	348.9 (feet)	GPS OBS

AB2800

AB2800	X	-404,702.710 (meters)	COMP
AB2800	Y	-5,368,084.410 (meters)	COMP
AB2800	Z	3,409,282.244 (meters)	COMP
AB2800	LAPLACE CORR-	0.76 (seconds)	DEFLEC99
AB2800	ELLIP HEIGHT-	80.11 (meters)	GPS OBS
AB2800	GEOID HEIGHT-	-26.17 (meters)	GEOID99

AB2800

AB2800 HORZ ORDER - B
AB2800 ELLP ORDER - FOURTH CLASS II

AB2800

AB2800.This mark is at Harrison Co (ASL) Airport (ASL)

AB2800

AB2800.The horizontal coordinates were established by GPS observations
AB2800.and adjusted by the National Geodetic Survey in February 1996.

AB2800

AB2800.The orthometric height was determined by GPS observations and a
AB2800.high-resolution geoid model.

AB2800

AB2800.GPS derived orthometric heights for airport stations designated as
AB2800.PACS or SACS are published to 2 decimal places. This maintains
AB2800.centimeter relative accuracy between the PACS and SACS. It does
AB2800.not indicate centimeter accuracy relative to other marks which are
AB2800.part of the NAVD 88 network.

AB2800

AB2800. X, Y, and Z were computed from the position and the ellipsoidal ht.

AB2800

AB2800.The Laplace correction was computed from DEFLEC99 derived deflections.

AB2800

AB2800.The ellipsoidal height was determined by GPS observations
AB2800.and is referenced to NAD 83.

AB2800

AB2800.The geoid height was determined by GEOID99.

AB2800;	North	East	Units	Scale	Converg.
AB2800;SPC TXNC	- 2,102,524.608	993,403.917	MT	0.99991530	+2 17 04.0
AB2800;UTM 15	- 3,598,888.117	376,831.251	MT	0.99978707	-0 42 18.4

AB2800

AB2800|-----|

AB2800	PID	Reference Object	Distance	Geod.	Az	
				dddmmss.s		
AB2800						
AB2800	AB5990	FAA ASL B	309.174 METERS	01926		
AB2800	AB5991	FAA ASL C	341.990 METERS	12602		
AB2800 -----						
AB2800						
AB2800		SUPERSEDED SURVEY CONTROL				
AB2800						
AB2800 ELLIP HT	-	80.17 (m)		GP() 1 1	
AB2800						
AB2800.Superseeded values are not recommended for survey control.						
AB2800.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.						
AB2800.See file dsdata.txt to determine how the superseded data were derived.						
AB2800						
AB2800_MARKER: I = METAL ROD						
AB2800_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)						
AB2800_STAMPING: FAA ASL A 1994						
AB2800_PROJECTION: FLUSH						
AB2800_MAGNETIC: I = MARKER IS A STEEL ROD						
AB2800_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL						
AB2800_SATELLITE: THE SITE LOCATION WAS REPORTED AS SUITABLE FOR						
AB2800+SATELLITE: SATELLITE OBSERVATIONS - 1994						
AB2800_ROD/PIPE-DEPTH: 12.2 meters						
AB2800_SLEEVE-DEPTH : 0.90 meters						
AB2800						
AB2800 HISTORY	- Date	Condition	Recov.	By		
AB2800 HISTORY	- 1994	MONUMENTED	NGS			
AB2800 HISTORY	- 19980820	GOOD	TXDOT			
AB2800						
AB2800		STATION DESCRIPTION				
AB2800						
AB2800'DESCRIBED BY NATIONAL GEODETIC SURVEY 1994 (AJL)						
AB2800'THE STATION IS LOCATED ON THE EAST SIDE OF MARSHALL AT THE MARSHALL						
AB2800'HARRISON COUNTY AIRPORT, IN THE CENTER OF A GRASS ISLAND CREATED BY						
AB2800'THE CIRCLE DRIVE TO THE TERMINAL. OWNERSHIP--HARRISON COUNTY, RT 9						
AB2800'BOX 3, MARSHALL, TX 75670. AIRPORT MANAGER IS ROBERT R. AIELLO.						
AB2800'PHONE 903-938-1394. CONTACT HIM ONE DAY IN ADVANCE FOR AN ESCORT TO						
AB2800'THE STATION. TO REACH FROM THE INTERSECTION OF U.S. HIGHWAYS 80 AND						
AB2800'59 IN MARSHALL, GO EAST AND SOUTHEAST ON HIGHWAY 80 FOR 3.13 KM (1.95						
AB2800'MI) TO A PAVED ROAD RIGHT (WARREN DRIVE) AND A SIGN NATIONAL GUARD						
AB2800'ARMORY-MARSHALL MUNICIPAL AIRPORT. TURN RIGHT, SOUTH, ON WARREN DRIVE						
AB2800'FOR 2.39 KM (1.50 MI) TO THE AIRPORT ENTRANCE AND THE STATION ON THE						
AB2800'LEFT. STATION IS A PUNCH HOLE TOP CENTER OF A STAINLESS STEEL ROD IN						
AB2800'A GREASE FILLED SLEEVE 90 CM LONG ENCASED IN A 12.7 CM PVC PIPE WITH A						
AB2800'LOGO CAP SURROUNDED BY CONCRETE SET FLUSH WITH THE GROUND. IT IS 42.4						
AB2800'M (139.1 FT) WEST OF THE SOUTH CORNER OF THE TERMINAL, 25.3 M (83.0						
AB2800'FT) WEST-NORTHWEST OF A UTILITY POLE WITH TWO TRANSFORMERS, 31.6 M						
AB2800'(103.7 FT) EAST-NORtheast OF THE CENTER OF WARREN DRIVE, 13.1 M (43.0						
AB2800'FT) SOUTH OF A FIRE HYDRANT, 7.5 M (24.6 FT) WEST-SOUTHWEST OF A						
AB2800'FLAGPOLE, AND 0.8 M (2.6 FT) WEST OF A FIBERGLASS WITNESS POST.						
AB2800'DESCRIBED BY D.G. AUG						
AB2800						
AB2800		STATION RECOVERY (1998)				
AB2800						
AB2800'RECOVERY NOTE BY TEXAS DEPARTMENT OF TRANSPORTATION 1998 (WEH)						
AB2800'GOOD.						

(JOHNSON & PACE POINT No. 0117)

NGS STATION FAA F12 A 1994 - RUSK COUNTY AIRPORT

National Geodetic Survey, Retrieval Date = MAY 3, 2001

AB2802

AB2802 PACS - This is a Primary Airport Control Station.

AB2802 DESIGNATION - FAA F12 A 1994

AB2802 PID - AB2802

AB2802 STATE/COUNTY- TX/RUSK

AB2802 USGS QUAD - HENDERSON (1973)

AB2802

*CURRENT SURVEY CONTROL

AB2802

AB2802* NAD 83(1993)- 32 09 00.12011 (N) 094 51 08.20997 (W) ADJUSTED

AB2802* NAVD 88 - 130.66 (meters) 428.7 (feet) GPS OBS

AB2802

AB2802 X - -457,219.519 (meters) COMP

AB2802 Y - -5,385,939.644 (meters) COMP

AB2802 Z - 3,374,584.252 (meters) COMP

AB2802 LAPLACE CORR- -0.24 (seconds) DEFLEC99

AB2802 ELLIP HEIGHT- 104.24 (meters) GPS OBS

AB2802 GEOID HEIGHT- -26.31 (meters) GEOID99

AB2802

AB2802 HORZ ORDER - B

AB2802 ELLP ORDER - FOURTH CLASS II

AB2802

AB2802.This mark is at Rusk Co (F12) Airport (F12)

AB2802

AB2802.The horizontal coordinates were established by GPS observations

AB2802.and adjusted by the National Geodetic Survey in February 1996.

AB2802

AB2802.The orthometric height was determined by GPS observations and a
AB2802.high-resolution geoid model.

AB2802

AB2802.GPS derived orthometric heights for airport stations designated as

AB2802.PACS or SACS are published to 2 decimal places. This maintains

AB2802.centimeter relative accuracy between the PACS and SACS. It does

AB2802.not indicate centimeter accuracy relative to other marks which are

AB2802.part of the NAVD 88 network.

AB2802

AB2802. X, Y, and Z were computed from the position and the ellipsoidal ht.

AB2802

AB2802.The Laplace correction was computed from DEFLEC99 derived deflections.

AB2802

AB2802.The ellipsoidal height was determined by GPS observations

AB2802.and is referenced to NAD 83.

AB2802

AB2802.The geoid height was determined by GEOID99.

AB2802

AB2802; North East Units Scale Converg.

AB2802;SPC TXNC - 2,059,575.861 944,051.293 MT 0.99999542 +1 59 22.0

AB2802;UTM 15 - 3,558,568.851 325,314.402 MT 0.99997633 -0 59 09.3

AB2802

AB2802: Primary Azimuth Mark

Grid Az

AB2802:SPC TXNC - HENPORT AZ MK 185 12 06.9
 AB2802:UTM 15 - HENPORT AZ MK 188 10 38.2
 AB2802
 AB2802|-----|
 AB2802| PID Reference Object Distance Geod. Az |
 AB2802| dddmmss.s |
 AB2802| CR1374 HENPORT AZ MK 463.996 METERS 1871128.9 |
 AB2802|-----|
 AB2802
 AB2802 SUPERSEDED SURVEY CONTROL
 AB2802
 AB2802 ELLIP HT - 104.29 (m) GP() 1 1
 AB2802
 AB2802.Superseeded values are not recommended for survey control.
 AB2802.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.
 AB2802.See file dsdata.txt to determine how the superseded data were derived.
 AB2802
 AB2802_MARKER: I = METAL ROD
 AB2802_SETTING: 59 = STAINLESS STEEL ROD IN SLEEVE (10 FT.+)
 AB2802_STAMPING: FAA F12 A 1994
 AB2802_PROJECTION: FLUSH
 AB2802_MAGNETIC: I = MARKER IS A STEEL ROD
 AB2802_STABILITY: B = PROBABLY HOLD POSITION/ELEVATION WELL
 AB2802_ROD/PIPE-DEPTH: 6.6 meters
 AB2802_SLEEVE-DEPTH : 0.90 meters
 AB2802
 AB2802 HISTORY - Date Condition Recov. By
 AB2802 HISTORY - 1994 MONUMENTED NGS
 AB2802 HISTORY - 20001226 GOOD LOCENG
 AB2802
 AB2802 STATION DESCRIPTION
 AB2802
 AB2802'DESCRIBED BY NATIONAL GEODETIC SURVEY 1994 (AJL)
 AB2802'THE STATION IS LOCATED ABOUT 3.0 KM (1.85 MI) WEST OF HENDERSON AT THE
 AB2802'HENDERSON-RUNK COUNTY AIRPORT, IN BRUSH AT THE NORTH END OF THE
 AB2802'AIRFIELD, ALONG THE ENTRANCE ROAD AND ADJACENT TO A CATTLE YARD.
 AB2802'OWNERSHIP--RUSK COUNTY, 3355 F.M. 13 WEST, HENDERSON, TX 75652.
 AB2802'AIRPORT MANAGER IS J.W. DUNN. PHONE 903-657-7081. TO REACH THE
 AB2802'STATION FROM THE JUNCTION OF U.S. HIGHWAYS 79, 259, AND STATE HIGHWAY
 AB2802'64 IN HENDERSON, GO WEST ON HIGHWAY 64 FOR 3.47 KM (2.15 MI) TO A
 AB2802'CROSSROAD (EVENSIDE ROAD) . TURN LEFT, SOUTH, ON EVENSIDE ROAD FOR
 AB2802'2.0 KM (1.25 MI) TO A CROSSROAD. TURN RIGHT, WEST, ON FARM ROAD 13
 AB2802'(W. MAIN STREET) FOR 3.30 KM (2.05 MI) TO A Y-JUNCTION. BEAR LEFT,
 AB2802'WEST, ON FARM ROAD 13 FOR 0.61 KM (0.35 MI) TO THE AIRPORT ENTRANCE ON
 AB2802'THE LEFT. TURN LEFT, SOUTH, ON THE ENTRANCE ROAD FOR 0.01 KM (0.00
 AB2802'MI) TO THE STATION ON THE RIGHT. THE STATION IS A PUNCH HOLE
 AB2802'TOP CENTER OF A STAINLESS STEEL ROD IN A GREAS FILLED SLEEVE ENCASED
 AB2802'IN A 12.7 CM PVC PIPE WITH A LOGO CAP SURROUNDED BY CONCRETE SET FLUSH
 AB2802'WITH THE GROUND. IT IS 96.7 M (317.3 FT) SOUTH OF THE CENTER OF FARM
 AB2802'ROAD 13, 44.4 M (145.7 FT) NORTHWEST OF THE NORTH GATE POST OF A GATE
 AB2802'IN A PIPE FENCE, 26.5 M (86.9 FT) WEST OF AND ACROSS THE ROAD FROM THE
 AB2802'PIPE FENCE, 16.6 M (54.5 FT) WEST OF THE CENTER OF THE ENTRANCE ROAD,
 AB2802'AND 0.8 M (2.6 FT) EAST OF A FIBERGLASS WITNESS POST. DESCRIBED BY
 AB2802'D.G. AUG

NGS STATION E 160 – GREGG COUNTY COURTHOUSE

National Geodetic Survey, Retrieval Date = MAY 3, 2001

CR0161

CR0161 DESIGNATION - E 160

CR0161 PID - CR0161

CR0161 STATE/COUNTY- TX/GREGG

CR0161 USGS QUAD - LAKEPORT (1983)

CR0161

*CURRENT SURVEY CONTROL

CR0161

CR0161*	NAD 83(1986) -	32 29 47.	(N)	094 44 19.	(W)	SCALED
CR0161*	NAVD 88 -	108.303	(meters)	355.32	(feet)	ADJUSTED

CR0161

CR0161 GEOID HEIGHT- -26.31 (meters) GEOID99

CR0161 DYNAMIC HT - 108.178 (meters) COMP

CR0161 MODELED GRAV- 979,491.1 (mgal) NAVD 88

CR0161

CR0161 VERT ORDER - SECOND CLASS 0

CR0161

CR0161.The horizontal coordinates were scaled from a topographic map and have
CR0161.an estimated accuracy of +/- 6 seconds.

CR0161

CR0161.The orthometric height was determined by differential leveling

CR0161.and adjusted by the National Geodetic Survey in June 1991.

CR0161

CR0161.The geoid height was determined by GEOID99.

CR0161

CR0161.The dynamic height is computed by dividing the NAVD 88

CR0161.geopotential number by the normal gravity value computed on the

CR0161.Geodetic Reference System of 1980 (GRS 80) ellipsoid at 45

CR0161.degrees latitude (g = 980.6199 gals.).

CR0161

CR0161.The modeled gravity was interpolated from observed gravity values.

CR0161

CR0161;	North	East	Units	Estimated Accuracy
CR0161;SPC TXNC	- 2,098,340.	953,390.	MT	(+/- 180 meters Scaled)

CR0161

CR0161 SUPERSEDED SURVEY CONTROL

CR0161

CR0161 NGVD 29 - 108.333 (m) 355.42 (f) ADJ UNCH 2 0

CR0161

CR0161 Superseded values are not recommended for survey control.

CR0161.NGS no longer adjusts projects to the NAD 27 or NGVD 29 datums.

CR0161.See file dsdata.txt to determine how the superseded data were derived.

CR0161

CR0161_MARKER: DB = BENCH MARK DISK

CR0161_SETTING: 7 = SET IN TOP OF CONCRETE MONUMENT

CR0161_STAMPING: E 160 1934

CR0161_STABILITY: C = MAY HOLD, BUT OF TYPE COMMONLY SUBJECT TO

CR0161+STABILITY: SURFACE MOTION

CR0161

CR0161 HISTORY - Date Condition Recov. By
CR0161 HISTORY - 1934 MONUMENTED CGS
CR0161 HISTORY - 1972 GOOD LOCENG

CR0161

STATION DESCRIPTION

CR0161

CR0161' DESCRIBED BY COAST AND GEODETIC SURVEY 1934

CR0161' IN LONGVIEW.

CR0161' GREGG COUNTY COURT HOUSE GROUNDS. AT SOUTH SIDE FACING METHVIN

CR0161' STREET. IN CENTER OF WEST END OF LAWN STRIP BETWEEN CONCRETE WALKS TO

CR0161' MAIN ENTRANCE OF BUILDING. TABLET SET IN TOP OF CONCRETE POST, 50

CR0161' YARDS FROM C.L. OF METHVIN STREET.

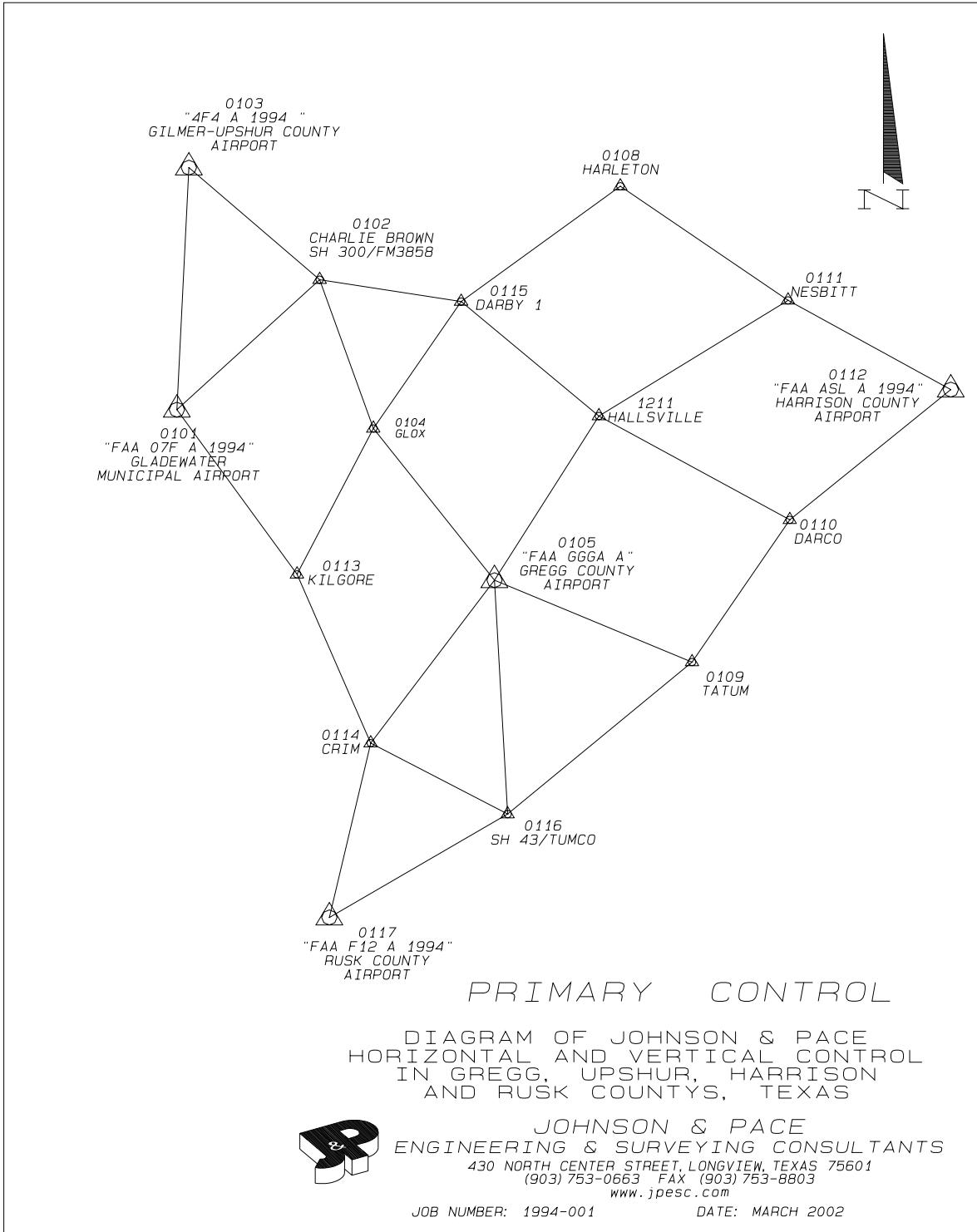
CR0161

STATION RECOVERY (1972)

CR0161

CR0161' RECOVERY NOTE BY LOCAL ENGINEER (INDIVIDUAL OR FIRM) 1972

CR0161' RECOVERED IN GOOD CONDITION.



PRIMARY CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site ID	Site Descriptor			Position			95% Error	Fix Status
1	0105	FAA	GGG	A	Lat.	32° 23' 35.35432"	N	0.000	Fixed
					Lon.	94° 42' 10.17601"	W	0.000	Fixed
					Elv.	355.900		0.000	Fixed
2	0115	DARBY	1		Lat.	32° 35' 54.03601"	N	0.043	
					Lon.	94° 43' 20.22741"	W	0.057	
					Elv.	354.699		0.081	
3	0110	DARCO			Lat.	32° 25' 46.32191"	N	0.050	
					Lon.	94° 27' 06.30411"	W	0.068	
					Elv.	360.831		0.089	
4	1211	HALLSVILLE			Lat.	32° 30' 38.86848"	N	0.040	
					Lon.	94° 36' 34.14521"	W	0.052	
					Elv.	396.268		0.069	
5	0109	TATUM			Lat.	32° 19' 40.45161"	N	0.051	
					Lon.	94° 32' 19.99111"	W	0.067	
					Elv.	353.421		0.093	
6	0104	GLOX			Lat.	32° 30' 27.12568"	N	0.035	
					Lon.	94° 48' 01.40252"	W	0.042	
					Elv.	384.039		0.052	
7	0103	4F4	A	1994	Lat.	32° 42' 11.99241"	N	0.000	Fixed
					Lon.	94° 56' 54.90254"	W	0.000	Fixed
					Elv.	413.500		0.000	Fixed
8	0101	FAA	07F	A 1994	Lat.	32° 31' 34.13033"	N	0.000	Fixed
					Lon.	94° 57' 56.79070"	W	0.000	Fixed
					Elv.	286.900		0.000	Fixed
9	0102	CHARLIE BROWN			Lat.	32° 37' 04.58408"	N	0.040	
					Lon.	94° 50' 28.55638"	W	0.050	
					Elv.	412.945		0.067	
10	0113	KILGORE			Lat.	32° 24' 08.93138"	N	0.041	
					Lon.	94° 52' 09.36126"	W	0.054	
					Elv.	355.158		0.071	
11	0114	CRIM			Lat.	32° 16' 36.52259"	N	0.056	
					Lon.	94° 48' 43.97371"	W	0.068	

Elv. 388.427 0.090

Site ID	Site Descriptor		Position	95% Error	Fix Status
12 0116	SH 43 / TUMCO	Lat. 32° 13' 16.68848" N Lon. 94° 41' 56.58879" W Elv. 439.554		0.059 0.071 0.095	
13 0117	FAA F12 A 1994	Lat. 32° 09' 00.12012" N Lon. 94° 51' 08.20997" W Elv. 428.700		0.000 0.000 0.000	Fixed Fixed Fixed
14 0111	NESBITT	Lat. 32° 35' 25.75804" N Lon. 94° 26' 45.37249" W Elv. 331.450		0.050 0.069 0.098	
15 0112	FAA ASL A 1994	Lat. 32° 31' 13.75733" N Lon. 94° 18' 41.05096" W Elv. 348.900		0.000 0.000 0.000	Fixed Fixed Fixed
16 0108	HARLETON	Lat. 32° 40' 43.41252" N Lon. 94° 35' 02.25408" W Elv. 349.954		0.071 0.092 0.133	

PRIMARY CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site ID	Site Descriptor			Position	95% Error	Fix Status
1	0105	FAA GGG A	East.	3140306.953	0.000	Fixed	
			Nrth.	6847154.379	0.000	Fixed	
			Elev.	355.900	0.000	Fixed	
2	0115	DARBY 1	East.	3131620.842	0.057		
			Nrth.	6921537.634	0.043		
			Elev.	354.699	0.081		
3	0110	DARCO	East.	3217241.761	0.068		
			Nrth.	6863272.724	0.050		
			Elev.	360.831	0.089		
4	1211	HALLSVILLE	East.	3167514.611	0.052		
			Nrth.	6890977.533	0.040		
			Elev.	396.268	0.069		
5	0109	TATUM	East.	3191770.257	0.067		
			Nrth.	6825301.010	0.051		
			Elev.	353.421	0.093		
6	0104	GLOX	East.	3108746.553	0.042		
			Nrth.	6887666.167	0.035		
			Elev.	384.039	0.052		
7	0103	4F4 A 1994	East.	3060682.172	0.000	Fixed	
			Nrth.	6957280.049	0.000	Fixed	
			Elev.	413.500	0.000	Fixed	
8	0101	FAA 07F A 1994	East.	3057565.447	0.000	Fixed	
			Nrth.	6892678.558	0.000	Fixed	
			Elev.	286.900	0.000	Fixed	
9	0102	CHARLIE BROWN	East.	3094754.808	0.050		
			Nrth.	6927366.026	0.040		
			Elev.	412.945	0.067		
10	0113	KILGORE	East.	3088847.169	0.054		
			Nrth.	6848729.651	0.041		
			Elev.	355.158	0.071		
11	0114	CRIM	East.	3108049.314	0.068		
			Nrth.	6803652.317	0.056		

Site ID	Site Descriptor	Elev.	388.427	0.090	
			95% Position	Error	Fix Status
12 0116	SH 43 / TUMCO	East. Nrth. Elev.	3143732.716 6784717.264 439.554	0.071 0.059 0.095	
13 0117	FAA F12 A 1994	East. Nrth. Elev.	3097274.950 6757125.137 428.700	0.000 0.000 0.000	Fixed Fixed Fixed
14 0111	NESBITT	East. Nrth. Elev.	3216775.281 6921853.608 331.450	0.069 0.050 0.098	
15 0112	FAA ASL A 1994	East. Nrth. Elev.	3259192.683 6898032.819 348.900	0.000 0.000 0.000	Fixed Fixed Fixed
16 0108	HARLETON	East. Nrth. Elev.	3173100.810 6952320.035 349.954	0.092 0.071 0.133	

Site ID	Site Descriptor	Convergence	Scale Factor
1 0105	FAA GGG A	2° 04.257'	0.99993818
2 0115	DARBY 1	2° 03.621'	0.99990371
3 0110	DARCO	2° 12.474'	0.99993114
4 1211	HALLSVILLE	2° 07.312'	0.99991687
5 0109	TATUM	2° 09.622'	0.99995180
6 0104	GLOX	2° 01.065'	0.99991740
7 0103	4F4 A 1994	1° 56.215'	0.99989098
8 0101	FAA 07F A 1994	1° 55.653'	0.99991439

	Site ID	Site Descriptor	Convergence	Scale Factor
9	0102	CHARLIE BROWN	1° 59.727'	0.99990108
10	0113	KILGORE	1° 58.811'	0.99993634
11	0114	CRIM	2° 00.678'	0.99996335
12	0116	SH 43 / TUMCO	2° 04.381'	0.99997680
13	0117	FAA F12 A 1994	1° 59.367'	0.99999542
14	0111	NESBITT	2° 12.664'	0.99990480
15	0112	FAA ASL A 1994	2° 17.066'	0.99991530
16	0108	HARLETON	2° 08.147'	0.99989367

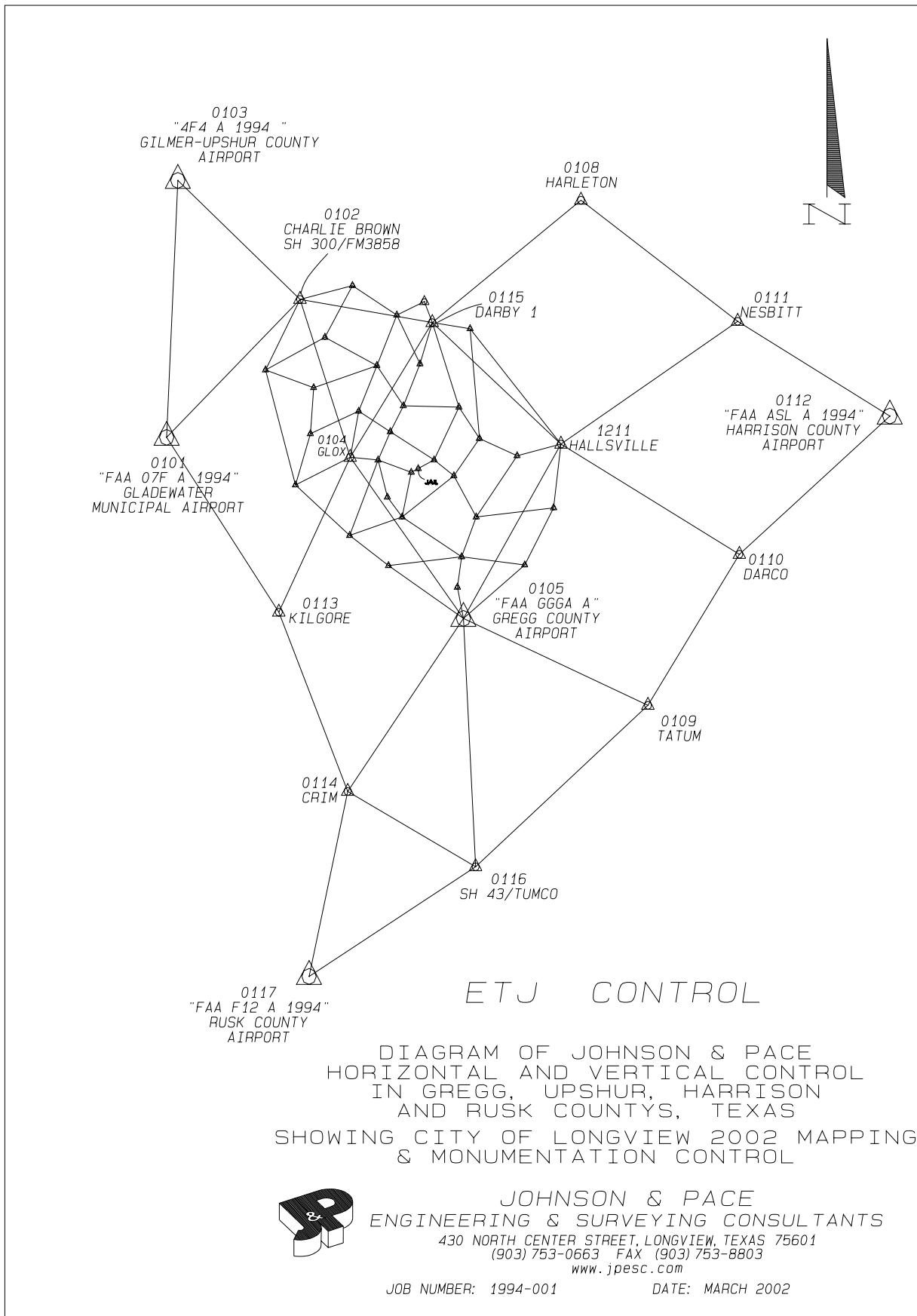
PRIMARY CONTROL NETWORK RELATIVE ACCURACY

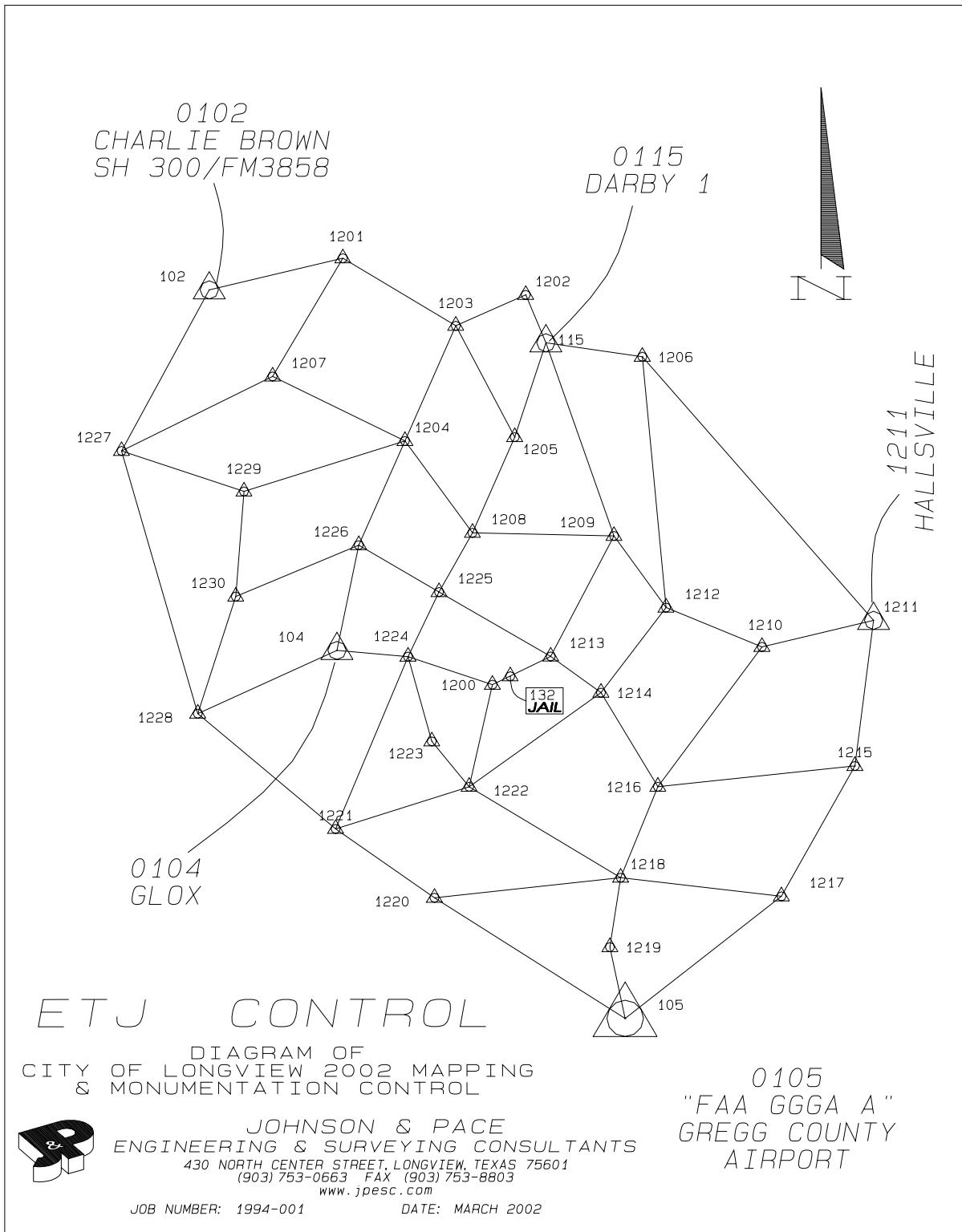
Desired Horizontal Accuracy: 0.033USft + 10ppm Date: 03/30/02
 Desired Vertical Accuracy: 0.066USft +
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	0105	Lat	0.040	0.158	1:992050	1:747632	51586.604
	1211	Lng	0.052	0.158			
		Elv	0.069	0.159			
2	1211	Lat	0.051	0.174	1:862559	1:661964	56929.059
	0110	Lng	0.066	0.174			
		Elv	0.086	0.175			
3	1211	Lat	0.059	0.214	1:933571	1:673248	70017.922
	0109	Lng	0.075	0.214			
		Elv	0.104	0.214			
4	0110	Lat	0.054	0.140	1:617929	1:476320	45726.802
	0109	Lng	0.074	0.140			
		Elv	0.096	0.141			
5	0105	Lat	0.051	0.171	1:834547	1:601232	55914.696
	0109	Lng	0.067	0.171			
		Elv	0.093	0.172			
6	0104	Lat	0.036	0.125	1:786075	1:567720	40876.014
	0115	Lng	0.052	0.125			
		Elv	0.072	0.126			
7	1211	Lat	0.043	0.144	1:857198	1:654804	47145.905
	0115	Lng	0.055	0.144			
		Elv	0.072	0.145			
8	1211	Lat	0.045	0.180	1:1032751	1:829110	58866.884
	0104	Lng	0.057	0.180			
		Elv	0.071	0.181			
9	0105	Lat	0.035	0.157	1:1222823	1:987665	51358.623
	0104	Lng	0.042	0.157			
		Elv	0.052	0.158			
10	0103	Lat	0.000	0.197	1:0	1:0	64683.775
	0101	Lng	0.000	0.197			
		Elv	0.000	0.198			
11	0103	Lat	0.040	0.139	1:906924	1:676809	45346.198

				Allow.	Horizontal	Vertical	
				Error	Relative Acc	Relative Acc	Distance
	Site Pair						
0102		Lng	0.050	0.139			
		Elv	0.067	0.140			
12	0101	Lat	0.040	0.155	1:1017215	1:759115	50860.769
	0102	Lng	0.050	0.155			
		Elv	0.067	0.156			
13	0102	Lat	0.037	0.114	1:666572	1:491158	37328.061
	0115	Lng	0.056	0.114			
		Elv	0.076	0.116			
14	0104	Lat	0.035	0.129	1:859137	1:647657	42097.712
	0102	Lng	0.049	0.129			
		Elv	0.065	0.130			
15	0113	Lat	0.045	0.134	1:780903	1:583074	43730.581
	0104	Lng	0.056	0.134			
		Elv	0.075	0.135			
16	0113	Lat	0.041	0.165	1:999064	1:759852	53949.489
	0101	Lng	0.054	0.165			
		Elv	0.071	0.166			
17	0104	Lat	0.035	0.157	1:1224544	1:989055	51430.887
	0101	Lng	0.042	0.157			
		Elv	0.052	0.158			
18	0105	Lat	0.041	0.157	1:953475	1:725178	51487.677
	0113	Lng	0.054	0.157			
		Elv	0.071	0.158			
19	0113	Lat	0.059	0.150	1:636362	1:485147	48999.880
	0114	Lng	0.077	0.150			
		Elv	0.101	0.151			
20	0105	Lat	0.056	0.165	1:796476	1:601782	54160.361
	0114	Lng	0.068	0.165			
		Elv	0.090	0.166			
21	0116	Lat	0.068	0.192	1:739871	1:566567	62889.093
	0109	Lng	0.085	0.192			
		Elv	0.111	0.193			
22	0105	Lat	0.059	0.191	1:880768	1:658258	62534.585
	0116	Lng	0.071	0.191			
		Elv	0.095	0.192			
23	0116	Lat	0.058	0.124	1:602954	1:480927	40397.855
	0114	Lng	0.067	0.124			
		Elv	0.084	0.125			
24	0116	Lat	0.059	0.165	1:761061	1:568793	54035.326
	0117	Lng	0.071	0.165			
		Elv	0.095	0.166			

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
25	0114	Lat	0.056	0.146	1:702354	1:530667	47760.069
		Lng	0.068	0.146			
		Elv	0.090	0.147			
26	1211	Lat	0.045	0.178	1:922906	1:709062	58143.177
		Lng	0.063	0.178			
		Elv	0.082	0.178			
27	0111	Lat	0.052	0.260	1:1199493	1:925695	85164.015
		Lng	0.071	0.260			
		Elv	0.092	0.260			
28	0110	Lat	0.050	0.166	1:801256	1:619152	54485.460
		Lng	0.068	0.166			
		Elv	0.088	0.167			
29	1211	Lat	0.064	0.188	1:742203	1:535677	61602.943
		Lng	0.083	0.188			
		Elv	0.115	0.189			
30	0115	Lat	0.063	0.158	1:629998	1:473943	51659.873
		Lng	0.082	0.158			
		Elv	0.109	0.159			
31	0111	Lat	0.063	0.163	1:634010	1:479791	53256.857
		Lng	0.084	0.163			
		Elv	0.111	0.164			
32	0110	Lat	0.058	0.179	1:751131	1:547553	58588.199
		Lng	0.078	0.179			
		Elv	0.107	0.180			
33	0111	Lat	0.050	0.149	1:705119	1:496461	48653.270
		Lng	0.069	0.149			
		Elv	0.098	0.150			





ETJ CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1204	McCANN/PLILER	Lat. 32° 34' 12.58712" N Lon. 94° 46' 25.04225" W Elv. 399.481	0.008 0.011 0.017	
2	1201	MACKEY RD	Lat. 32° 37' 33.92731" N Lon. 94° 47' 36.14935" W Elv. 368.879	0.013 0.018 0.026	
3	1202	FM 449	Lat. 32° 36' 46.99707" N Lon. 94° 43' 43.78804" W Elv. 432.906	0.009 0.012 0.019	
4	1205	KAWASAKI	Lat. 32° 34' 12.55134" N Lon. 94° 44' 04.45884" W Elv. 397.596	0.008 0.011 0.016	
5	1227	WHITE OAK ROAD	Lat. 32° 34' 12.46089" N Lon. 94° 52' 27.98452" W Elv. 446.428	0.013 0.018 0.027	
6	1203	US259/JUDSON	Lat. 32° 36' 16.07526" N Lon. 94° 45' 14.74191" W Elv. 401.175	0.009 0.012 0.018	
7	0102	SH300/FM3358	Lat. 32° 37' 04.58408" N Lon. 94° 50' 28.55638" W Elv. 412.945	0.000 0.000 0.000	Fixed Fixed Fixed
8	0115	DARBY 1	Lat. 32° 35' 54.03601" N Lon. 94° 43' 20.22740" W Elv. 354.699	0.000 0.000 0.000	Fixed Fixed Fixed
9	1208	MALL/TUTTLE	Lat. 32° 32' 29.99250" N Lon. 94° 45' 02.88229" W Elv. 349.735	0.008 0.011 0.015	
10	1207	SH300/FM1844	Lat. 32° 35' 27.90371" N Lon. 94° 49' 11.33388" W Elv. 435.813	0.010 0.015 0.021	

Site ID		Site Descriptor		Position	95% Error	Fix Status
11	1229	FM2275/FM1845	Lat. 32° 33' 23.75759" N Lon. 94° 49' 53.20630" W Elv. 400.177		0.012 0.015 0.022	
12	1224	US80/MOSLEY	Lat. 32° 30' 17.66218" N Lon. 94° 46' 30.94283" W Elv. 324.057		0.008 0.009 0.013	
13	1228	LONGVIEW CC	Lat. 32° 29' 23.56919" N Lon. 94° 51' 02.24264" W Elv. 319.363		0.012 0.016 0.024	
14	0104	US80/GLOX	Lat. 32° 30' 27.12568" N Lon. 94° 48' 01.40252" W Elv. 384.039		0.000 0.000 0.000	Fixed Fixed Fixed
15	1226	SH300/BLUE RIDGE	Lat. 32° 32' 20.91928" N Lon. 94° 47' 28.85916" W Elv. 412.821		0.008 0.011 0.015	
16	1230	WHATLEY/ROCKIN B	Lat. 32° 31' 29.65821" N Lon. 94° 50' 08.41282" W Elv. 351.908		0.010 0.014 0.021	
17	1225	B OWENS/MOSLEY	Lat. 32° 31' 26.81491" N Lon. 94° 45' 48.32713" W Elv. 326.050		0.008 0.010 0.014	
18	1221	SH 31	Lat. 32° 27' 12.85681" N Lon. 94° 48' 11.30255" W Elv. 264.313		0.013 0.017 0.025	
19	1222	FM1845/MICHAEL	Lat. 32° 27' 53.60766" N Lon. 94° 45' 18.69102" W Elv. 266.395		0.010 0.012 0.018	
20	1212	LOOP 281	Lat. 32° 31' 01.03142" N Lon. 94° 40' 58.87510" W Elv. 373.189		0.009 0.012 0.017	
21	1223	SH31/FM1845	Lat. 32° 28' 44.49735" N Lon. 94° 46' 04.39269" W Elv. 328.082		0.011 0.014 0.021	
22	1213	WELLNESS	Lat. 32° 30' 12.32531" N Lon. 94° 43' 28.53056" W Elv. 378.036		0.009 0.012 0.017	
23	1200	CITY HALL	Lat. 32° 29' 43.83841" N Lon. 94° 44' 44.30433" W Elv. 318.762		0.009 0.012 0.017	

Site				Position	95% Error	Fix Status
	ID	Site Descriptor				
24	1209	FM2208/FM2879	Lat.	32° 32' 21.11573" N	0.009	
			Lon.	94° 42' 02.02524" W	0.012	
			Elv.	411.924	0.018	
25	1214	EASTMAN/COTTON	Lat.	32° 29' 30.93235" N	0.009	
			Lon.	94° 42' 26.01335" W	0.012	
			Elv.	342.412	0.017	
26	1211	HALLSVILLE	Lat.	32° 30' 38.86848" N	0.000	Fixed
			Lon.	94° 36' 34.14521" W	0.000	Fixed
			Elv.	396.268	0.000	Fixed
27	1218	TX EASTMAN CO	Lat.	32° 26' 08.72995" N	0.009	
			Lon.	94° 42' 09.36874" W	0.012	
			Elv.	288.851	0.016	
28	1210	US80/TRINITY	Lat.	32° 30' 14.44539" N	0.009	
			Lon.	94° 38' 58.10826" W	0.013	
			Elv.	340.412	0.018	
29	1217	TALLEY ROAD	Lat.	32° 25' 42.06838" N	0.014	
			Lon.	94° 38' 44.93661" W	0.019	
			Elv.	264.400	0.028	
30	1216	NEIMAN MARCUS	Lat.	32° 27' 46.33039" N	0.010	
			Lon.	94° 41' 17.62337" W	0.013	
			Elv.	330.911	0.019	
31	1206	FM 2879	Lat.	32° 35' 35.06971" N	0.013	
			Lon.	94° 41' 17.53087" W	0.018	
			Elv.	387.657	0.025	
32	1215	IH 20/LANSING	Lat.	32° 28' 01.15751" N	0.013	
			Lon.	94° 37' 04.91978" W	0.019	
			Elv.	340.837	0.028	
33	0105	GGGA	Lat.	32° 23' 35.35432" N	0.000	Fixed
			Lon.	94° 42' 10.17601" W	0.000	Fixed
			Elv.	355.900	0.000	Fixed
34	1219	SH149/SH322	Lat.	32° 24' 53.53909" N	0.009	
			Lon.	94° 42' 26.35913" W	0.012	
			Elv.	264.157	0.017	
35	1220	IH 20/SABINE R	Lat.	32° 25' 54.09473" N	0.014	
			Lon.	94° 46' 08.15537" W	0.019	
			Elv.	277.604	0.026	
36	0132	JAIL	Lat.	32° 29' 52.25912" N	0.012	
			Lon.	94° 44' 21.14304" W	0.014	
			Elv.	375.102	0.023	

ETJ CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site ID	Site Descriptor		Position	95% Error	Fix Status
1	1204	McCANN/PLILER	East.	3116184.797	0.011	
			Nrth.	6910727.563	0.008	
			Elev.	399.481	0.017	
2	1201	MACKEY RD	East.	3109386.188	0.018	
			Nrth.	6930846.268	0.013	
			Elev.	368.879	0.026	
3	1202	FM 449	East.	3129414.602	0.012	
			Nrth.	6926813.809	0.009	
			Elev.	432.906	0.019	
4	1205	KAWASAKI	East.	3128207.082	0.011	
			Nrth.	6911152.806	0.008	
			Elev.	397.596	0.016	
5	1227	WHITE OAK ROAD	East.	3085147.076	0.018	
			Nrth.	6909628.306	0.013	
			Elev.	446.428	0.027	
6	1203	US259/JUDSON	East.	3121751.758	0.012	
			Nrth.	6923412.708	0.009	
			Elev.	401.175	0.018	
7	0102	SH300/FM3538	East.	3094754.808	0.000	Fixed
			Nrth.	6927366.026	0.000	Fixed
			Elev.	412.945	0.000	Fixed
8	0115	DARBY 1	East.	3131620.843	0.000	Fixed
			Nrth.	6921537.634	0.000	Fixed
			Elev.	354.699	0.000	Fixed
9	1208	MALL/TUTTLE	East.	3123580.752	0.011	
			Nrth.	6900616.487	0.008	
			Elev.	349.735	0.015	
10	1207	SH300/FM1844	East.	3101697.394	0.015	
			Nrth.	6917832.555	0.010	
			Elev.	435.813	0.021	

			Site ID	Site Descriptor		Position	95% Error	Fix Status
11	1229			FM2275/FM1845	East. Nrth. Elev.	3098555.396 6905169.266 400.177	0.015 0.012 0.022	
12	1224			US80/MOSLEY	East. Nrth. Elev.	3116521.754 6886984.087 324.057	0.009 0.008 0.013	
13	1228			LONGVIEW CC	East. Nrth. Elev.	3093493.608 6880705.769 319.363	0.016 0.012 0.024	
14	0104			US80/GLOX	East. Nrth. Elev.	3108746.553 6887666.167 384.039	0.000 0.000 0.000	Fixed Fixed Fixed
15	1226			SH300/BLUE RIDGE	East. Nrth. Elev.	3111125.660 6899256.725 412.821	0.011 0.008 0.015	
16	1230			WHATLEY/ROCKIN B	East. Nrth. Elev.	3097656.863 6893600.480 351.908	0.014 0.010 0.021	
17	1225			B OWENS/MOSLEY	East. Nrth. Elev.	3119920.270 6894097.508 326.050	0.010 0.008 0.014	
18	1221			SH 31	East. Nrth. Elev.	3108590.040 6868016.510 264.313	0.017 0.013 0.025	
19	1222			FM1845/MICHAEL	East. Nrth. Elev.	3123223.824 6872655.723 266.395	0.012 0.010 0.018	
20	1212	LOOP	281		East. Nrth. Elev.	3144780.300 6892384.382 373.189	0.012 0.009 0.017	
21	1223			SH31/FM1845	East. Nrth. Elev.	3119128.298 6877655.867 328.082	0.014 0.011 0.021	
22	1213			WELLNESS	East. Nrth. Elev.	3132151.752 6887002.599 378.036	0.012 0.009 0.017	
23	1200	CITY	HALL		East. Nrth. Elev.	3125769.908 6883893.178 318.762	0.012 0.009 0.017	

	Site ID	Site Descriptor		Position	95% Error	Fix Status
24	1209	FM2208/FM2879	East.	3139084.195	0.012	
			Nrth.	6900276.100	0.009	
			Elev.	411.924	0.018	
25	1214	EASTMAN/COTTON	East.	3137652.912	0.012	
			Nrth.	6883015.131	0.009	
			Elev.	342.412	0.017	
26	1211	HALLSVILLE	East.	3167514.611	0.000	Fixed
			Nrth.	6890977.533	0.000	Fixed
			Elev.	396.268	0.000	Fixed
27	1218	TX EASTMAN CO	East.	3139815.983	0.012	
			Nrth.	6862646.259	0.009	
			Elev.	288.851	0.016	
28	1210	US80/TRINITY	East.	3155286.198	0.013	
			Nrth.	6888057.028	0.009	
			Elev.	340.412	0.018	
29	1217	TALLEY ROAD	East.	3157422.996	0.019	
			Nrth.	6860591.651	0.014	
			Elev.	264.400	0.028	
30	1216	NEIMAN MARCUS	East.	3143889.853	0.013	
			Nrth.	6872663.417	0.010	
			Elev.	330.911	0.019	
31	1206	FM 2879	East.	3142179.410	0.018	
			Nrth.	6920001.292	0.013	
			Elev.	387.657	0.025	
32	1215	IH 20/LANSING	East.	3165470.053	0.019	
			Nrth.	6874953.365	0.013	
			Elev.	340.837	0.028	
33	0105	GGGA	East.	3140306.953	0.000	Fixed
			Nrth.	6847154.379	0.000	Fixed
			Elev.	355.900	0.000	Fixed
34	1219	SH149/SH322	East.	3138635.122	0.012	
			Nrth.	6855000.148	0.009	
			Elev.	264.157	0.017	
35	1220	IH 20/SABINE R	East.	3119417.655	0.019	
			Nrth.	6860435.120	0.014	
			Elev.	277.604	0.026	
36	0132	JAIL	East.	3127721.770	0.014	
			Nrth.	6884814.528	0.012	
			Elev.	375.102	0.023	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1204	McCANN/PLILER	2° 01.941'	0.99990769
2	1201	MACKEYRD	2° 01.294'	0.99990002
3	1202	FM 449	2° 03.407'	0.99990173
4	1205	KAWASAKI	2° 03.219'	0.99990769
5	1227	WHITE OAK ROAD	1° 58.642'	0.99990770
6	1203	US259/JUDSON	2° 02.580'	0.99990288
7	0102	SH300/FM3538	1° 59.727'	0.99990108
8	0115	DARBY 1	2° 03.621'	0.99990371
9	1208	MALL/TUTTLE	2° 02.688'	0.99991196
10	1207	SH300/FM1844	2° 00.429'	0.99990471
11	1229	FM2275/FM1845	2° 00.049'	0.99990970
12	1224	US80/MOSLEY	2° 01.887'	0.99991783
13	1228	LONGVIEW CC	1° 59.421'	0.99992035
14	0104	US80/GLOX	2° 01.065'	0.99991740
15	1226	SH300/BLUE RIDGE	2° 01.361'	0.99991235
16	1230	WHATLEY/ROCKIN B	1° 59.910'	0.99991459
17	1225	B OWENS/MOSLEY	2° 02.274'	0.99991472
18	1221	SH 31	2° 00.975'	0.99992671
19	1222	FM1845/MICHAEL	2° 02.544'	0.99992469
20	1212	LOOP 281	2° 04.906'	0.99991586
21	1223	SH31/FM1845	2° 02.128'	0.99992221
22	1213	WELLNESS	2° 03.545'	0.99991808
23	1200	CITY HALL	2° 02.856'	0.99991940
24	1209	FM2208/FM2879	2° 04.332'	0.99991234
25	1214	EASTMAN/COTTON	2° 04.113'	0.99992000
26	1211	HALLSVILLE	2° 07.312'	0.99991687
27	1218	TX EASTMAN CO	2° 04.265'	0.99992998

	Site ID	Site Descriptor	Convergence	Scale Factor
28	1210	US80/TRINITY	2° 06.003'	0.99991798
29	1217	TALLEY ROAD	2° 06.123'	0.99993136
30	1216	NEIMAN MARCUS	2° 04.735'	0.99992505
31	1206	FM 2879	2° 04.736'	0.99990444
32	1215	IH 20/LANSING	2° 07.032'	0.99992432
33	0105	GGGA	2° 04.257'	0.99993818
34	1219	SH149/SH322	2° 04.110'	0.99993393
35	1220	IH 20/SABINE R	2° 02.094'	0.99993074
36	0132	JAIL	2° 03.067'	0.99991901

ETJ CONTROL NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date: 03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1205	Lat	0.011	0.049	1:1047279	1:683008	15709.195
	1202	Lng	0.015	0.049			
		Elv	0.023	0.052			
2	1204	Lat	0.010	0.038	1:925464	1:633212	12031.035
	1205	Lng	0.013	0.038			
		Elv	0.019	0.042			
3	1204	Lat	0.014	0.066	1:1179922	1:816869	21238.635
	1201	Lng	0.018	0.066			
		Elv	0.026	0.068			
4	1227	Lat	0.017	0.099	1:1464430	1:976286	32217.448
	1201	Lng	0.022	0.099			
		Elv	0.033	0.100			
5	1205	Lat	0.010	0.043	1:1065923	1:692850	13857.010
	1203	Lng	0.013	0.043			
		Elv	0.020	0.047			
6	1203	Lat	0.010	0.027	1:598906	1:399271	8384.686
	1202	Lng	0.014	0.027			
		Elv	0.021	0.033			
7	1204	Lat	0.010	0.043	1:1065723	1:729179	13854.394
	1203	Lng	0.013	0.043			
		Elv	0.019	0.047			
8	1203	Lat	0.014	0.045	1:801639	1:554980	14429.523
	1201	Lng	0.018	0.045			
		Elv	0.026	0.048			
9	1201	Lat	0.013	0.047	1:835627	1:578511	15041.300
	0102	Lng	0.018	0.047			
		Elv	0.026	0.050			
10	1227	Lat	0.013	0.062	1:1120824	1:747216	20174.828
	0102	Lng	0.018	0.062			
		Elv	0.027	0.065			
11	0115	Lat	0.009	0.032	1:837233	1:558155	10046.804
	1203	Lng	0.012	0.032			
		Elv	0.018	0.037			

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
12	0115	Lat	0.008	0.035	1:993887	1:683297	10932.748
		Lng	0.011	0.035			
		Elv	0.016	0.039			
13	0115	Lat	0.009	0.020	1:476667	1:301053	5720.021
		Lng	0.012	0.020			
		Elv	0.019	0.027			
14	1204	Lat	0.009	0.039	1:1044057	1:736981	12528.671
		Lng	0.012	0.039			
		Elv	0.017	0.043			
15	1208	Lat	0.010	0.070	1:1633705	1:1089136	22871.859
		Lng	0.014	0.070			
		Elv	0.021	0.073			
16	1208	Lat	0.009	0.036	1:959040	1:676969	11508.497
		Lng	0.012	0.036			
		Elv	0.017	0.040			
17	1204	Lat	0.011	0.050	1:1075838	1:768455	16137.585
		Lng	0.015	0.050			
		Elv	0.021	0.053			
18	1207	Lat	0.012	0.064	1:1301156	1:867437	20818.495
		Lng	0.016	0.064			
		Elv	0.024	0.067			
19	1207	Lat	0.013	0.047	1:889243	1:604685	15117.147
		Lng	0.017	0.047			
		Elv	0.025	0.050			
20	1207	Lat	0.013	0.057	1:1026343	1:710545	18474.175
		Lng	0.018	0.057			
		Elv	0.026	0.060			
21	1207	Lat	0.010	0.037	1:786318	1:561656	11794.799
		Lng	0.015	0.037			
		Elv	0.021	0.041			
22	1204	Lat	0.012	0.057	1:1232450	1:880322	18486.747
		Lng	0.015	0.057			
		Elv	0.021	0.060			
23	1224	Lat	0.008	0.026	1:867332	1:600460	7805.998
		Lng	0.009	0.026			
		Elv	0.013	0.031			
24	0104	Lat	0.012	0.052	1:1047977	1:698651	16767.638
		Lng	0.016	0.052			
		Elv	0.024	0.055			

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
25	1229	Lat	0.013	0.041	1:767567	1:567332	13048.666
		Lng	0.017	0.041			
		Elv	0.023	0.045			
26	1204	Lat	0.009	0.040	1:1044851	1:737542	12538.213
		Lng	0.012	0.040			
		Elv	0.017	0.043			
27	1229	Lat	0.012	0.044	1:926182	1:661558	13892.740
		Lng	0.015	0.044			
		Elv	0.021	0.047			
28	1208	Lat	0.009	0.039	1:1044205	1:737085	12530.472
		Lng	0.012	0.039			
		Elv	0.017	0.043			
29	1224	Lat	0.010	0.042	1:1117341	1:788711	13408.095
		Lng	0.012	0.042			
		Elv	0.017	0.046			
30	1226	Lat	0.008	0.037	1:1075760	1:788891	11833.372
		Lng	0.011	0.037			
		Elv	0.015	0.041			
31	1228	Lat	0.013	0.079	1:1505648	1:1023841	25596.031
		Lng	0.017	0.079			
		Elv	0.025	0.081			
32	1224	Lat	0.013	0.073	1:1404160	1:954829	23870.741
		Lng	0.017	0.073			
		Elv	0.025	0.075			
33	1204	Lat	0.014	0.095	1:1634760	1:1150386	31060.431
		Lng	0.019	0.095			
		Elv	0.027	0.097			
34	1229	Lat	0.013	0.044	1:831284	1:614427	14131.850
		Lng	0.017	0.044			
		Elv	0.023	0.048			
35	1204	Lat	0.011	0.078	1:1682258	1:1097124	25233.871
		Lng	0.015	0.078			
		Elv	0.023	0.080			
36	1229	Lat	0.011	0.037	1:828917	1:610781	11604.852
		Lng	0.014	0.037			
		Elv	0.019	0.041			
37	1230	Lat	0.010	0.046	1:1043556	1:695704	14609.799
		Lng	0.014	0.046			
		Elv	0.021	0.049			

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
38	1204	Lat	0.009	0.053	1:1311247	1:947012	17046.243
		Lng	0.013	0.053			
		Elv	0.018	0.056			
39	1225	Lat	0.009	0.033	1:927047	1:637345	10197.549
		Lng	0.011	0.033			
		Elv	0.016	0.037			
40	1225	Lat	0.007	0.025	1:747712	1:534080	7477.116
		Lng	0.010	0.025			
		Elv	0.014	0.030			
41	1225	Lat	0.008	0.041	1:1289372	1:920980	12893.721
		Lng	0.010	0.041			
		Elv	0.014	0.044			
42	1224	Lat	0.008	0.026	1:788428	1:563163	7884.282
		Lng	0.010	0.026			
		Elv	0.014	0.031			
43	1230	Lat	0.011	0.043	1:903426	1:615972	13551.393
		Lng	0.015	0.043			
		Elv	0.022	0.046			
44	1230	Lat	0.010	0.040	1:898489	1:598992	12578.857
		Lng	0.014	0.040			
		Elv	0.021	0.043			
45	1228	Lat	0.015	0.061	1:986136	1:704383	19722.727
		Lng	0.020	0.061			
		Elv	0.028	0.063			
46	0104	Lat	0.013	0.061	1:1156018	1:786092	19652.306
		Lng	0.017	0.061			
		Elv	0.025	0.063			
47	1224	Lat	0.012	0.063	1:1285062	1:856708	20561.000
		Lng	0.016	0.063			
		Elv	0.024	0.066			
48	1224	Lat	0.009	0.031	1:807199	1:509810	9686.384
		Lng	0.012	0.031			
		Elv	0.019	0.036			
49	1213	Lat	0.009	0.049	1:1302625	1:868416	15631.507
		Lng	0.012	0.049			
		Elv	0.018	0.052			
50	1213	Lat	0.010	0.052	1:1299979	1:889459	16899.758
		Lng	0.013	0.052			
		Elv	0.019	0.055			

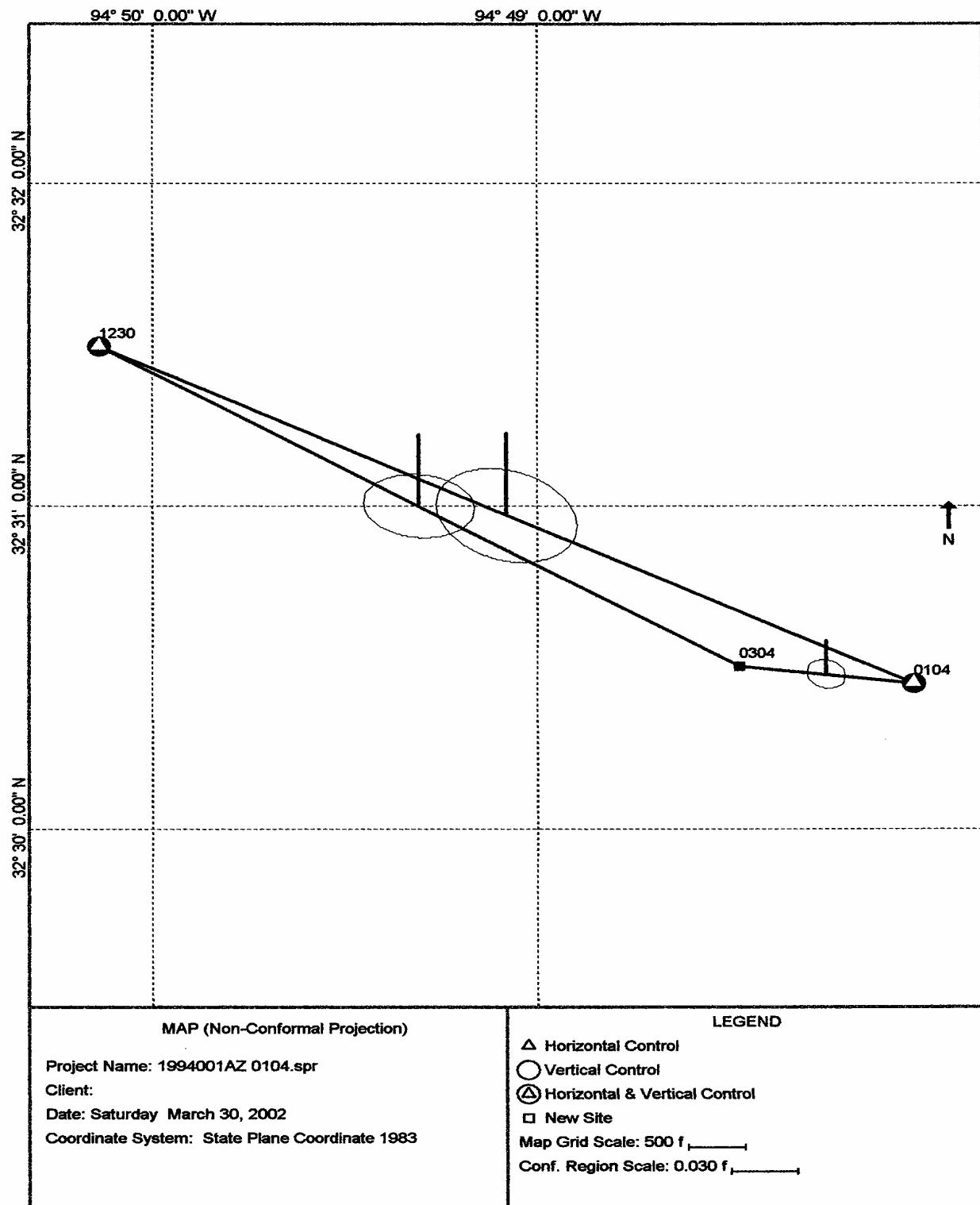
	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
51	1212	Lat	0.010	0.043	1:1056056	1:722565	13728.748
		Lng	0.013	0.043			
		Elv	0.019	0.046			
52	1213	Lat	0.010	0.050	1:1237599	1:846778	16088.791
		Lng	0.013	0.050			
		Elv	0.019	0.053			
53	1221	Lat	0.012	0.045	1:840187	1:571327	14283.175
		Lng	0.017	0.045			
		Elv	0.025	0.048			
54	1224	Lat	0.009	0.031	1:886532	1:609491	9751.861
		Lng	0.011	0.031			
		Elv	0.016	0.036			
55	1200	Lat	0.011	0.030	1:700927	1:455602	9112.045
		Lng	0.013	0.030			
		Elv	0.020	0.034			
56	1213	Lat	0.008	0.024	1:645448	1:443745	7099.924
		Lng	0.011	0.024			
		Elv	0.016	0.030			
57	1200	Lat	0.010	0.037	1:960278	1:677843	11523.357
		Lng	0.012	0.037			
		Elv	0.017	0.040			
58	1213	Lat	0.010	0.047	1:1152017	1:788222	14976.257
		Lng	0.013	0.047			
		Elv	0.019	0.050			
59	1212	Lat	0.009	0.031	1:811138	1:572568	9733.677
		Lng	0.012	0.031			
		Elv	0.017	0.036			
60	1209	Lat	0.010	0.048	1:1192986	1:816254	15508.810
		Lng	0.013	0.048			
		Elv	0.019	0.051			
61	1224	Lat	0.009	0.049	1:1318315	1:930575	15819.770
		Lng	0.012	0.049			
		Elv	0.017	0.052			
62	1222	Lat	0.011	0.048	1:959546	1:667510	15352.743
		Lng	0.016	0.048			
		Elv	0.023	0.051			
63	1222	Lat	0.009	0.022	1:587651	1:380245	6464.165
		Lng	0.011	0.022			
		Elv	0.017	0.028			

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
64	1213	Lat	0.009	0.044	1:1178470	1:785647	14141.648
		Lng	0.012	0.044			
		Elv	0.018	0.048			
65	1200	Lat	0.009	0.037	1:904856	1:653507	11763.138
		Lng	0.013	0.037			
		Elv	0.018	0.041			
66	1213	Lat	0.008	0.023	1:679501	1:453000	6795.010
		Lng	0.010	0.023			
		Elv	0.015	0.029			
67	1200	Lat	0.008	0.038	1:1083313	1:744777	11916.462
		Lng	0.011	0.038			
		Elv	0.016	0.042			
68	1214	Lat	0.010	0.055	1:1366489	1:934966	17764.410
		Lng	0.013	0.055			
		Elv	0.019	0.058			
69	1209	Lat	0.010	0.054	1:1332455	1:911680	17321.958
		Lng	0.013	0.054			
		Elv	0.019	0.056			
70	1212	Lat	0.009	0.037	1:981101	1:692541	11773.211
		Lng	0.012	0.037			
		Elv	0.017	0.041			
71	1209	Lat	0.010	0.062	1:1549032	1:1006871	20137.416
		Lng	0.013	0.062			
		Elv	0.020	0.065			
72	1212	Lat	0.009	0.036	1:946942	1:668429	11363.297
		Lng	0.012	0.036			
		Elv	0.017	0.040			
73	1210	Lat	0.009	0.040	1:967201	1:698534	12573.599
		Lng	0.013	0.040			
		Elv	0.018	0.043			
74	1218	Lat	0.013	0.055	1:984878	1:681839	17727.808
		Lng	0.018	0.055			
		Elv	0.026	0.058			
75	1209	Lat	0.009	0.069	1:1877981	1:1251987	22535.767
		Lng	0.012	0.069			
		Elv	0.018	0.072			
76	0115	Lat	0.008	0.069	1:2037738	1:1494341	22415.131
		Lng	0.011	0.069			
		Elv	0.015	0.071			

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
77	1212 0115	Lat	0.009	0.098	1:2665734	1:1881695	31988.840
		Lng	0.012	0.098			
		Elv	0.017	0.100			
78	1212 1211	Lat	0.009	0.070	1:1898327	1:1339996	22779.930
		Lng	0.012	0.070			
		Elv	0.017	0.072			
79	1212 1216	Lat	0.011	0.061	1:1410203	1:987142	19742.831
		Lng	0.014	0.061			
		Elv	0.020	0.063			
80	1210 1216	Lat	0.011	0.059	1:1276982	1:912130	19154.709
		Lng	0.015	0.059			
		Elv	0.021	0.062			
81	1216 1211	Lat	0.010	0.092	1:2299598	1:1573409	29894.760
		Lng	0.013	0.092			
		Elv	0.019	0.093			
82	1218 1216	Lat	0.010	0.034	1:831908	1:636165	10814.803
		Lng	0.013	0.034			
		Elv	0.017	0.039			
83	1216 1217	Lat	0.014	0.056	1:954546	1:671717	18136.390
		Lng	0.019	0.056			
		Elv	0.027	0.059			
84	1209 1205	Lat	0.010	0.048	1:1025590	1:732564	15383.825
		Lng	0.015	0.048			
		Elv	0.021	0.051			
85	1212 1206	Lat	0.014	0.085	1:1460097	1:1066994	27741.869
		Lng	0.019	0.085			
		Elv	0.026	0.087			
86	1209 1206	Lat	0.013	0.062	1:1050978	1:739577	19968.610
		Lng	0.019	0.062			
		Elv	0.027	0.064			
87	0115 1206	Lat	0.013	0.034	1:592828	1:426836	10670.924
		Lng	0.018	0.034			
		Elv	0.025	0.038			
88	1210 1206	Lat	0.015	0.106	1:1726599	1:1233285	34531.991
		Lng	0.020	0.106			
		Elv	0.028	0.107			
89	1206 1211	Lat	0.013	0.118	1:2140544	1:1541191	38529.802
		Lng	0.018	0.118			
		Elv	0.025	0.119			

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
90	1214	Lat	0.011	0.057	1:1310111	1:917077	18341.563
		Lng	0.014	0.057			
		Elv	0.020	0.059			
91	1214	Lat	0.010	0.038	1:929726	1:671469	12086.451
		Lng	0.013	0.038			
		Elv	0.018	0.042			
92	1210	Lat	0.014	0.052	1:829855	1:572314	16597.120
		Lng	0.020	0.052			
		Elv	0.029	0.054			
93	1216	Lat	0.014	0.067	1:1142270	1:775112	21703.148
		Lng	0.019	0.067			
		Elv	0.028	0.069			
94	1211	Lat	0.013	0.050	1:850294	1:576985	16155.595
		Lng	0.019	0.050			
		Elv	0.028	0.053			
95	1217	Lat	0.015	0.051	1:748362	1:531096	16463.960
		Lng	0.022	0.051			
		Elv	0.031	0.054			
96	1218	Lat	0.014	0.087	1:1422784	1:1016274	28455.697
		Lng	0.020	0.087			
		Elv	0.028	0.089			
97	0105	Lat	0.009	0.048	1:1291744	1:968808	15500.926
		Lng	0.012	0.048			
		Elv	0.016	0.051			
98	1218	Lat	0.008	0.026	1:703396	1:483585	7737.359
		Lng	0.011	0.026			
		Elv	0.016	0.031			
99	0105	Lat	0.009	0.026	1:668583	1:471941	8023.000
		Lng	0.012	0.026			
		Elv	0.017	0.032			
100	1219	Lat	0.014	0.061	1:1031772	1:700131	19603.666
		Lng	0.019	0.061			
		Elv	0.028	0.063			
101	0105	Lat	0.014	0.067	1:1145382	1:777223	21762.236
		Lng	0.019	0.067			
		Elv	0.028	0.069			
102	1218	Lat	0.013	0.063	1:1079965	1:789205	20519.345
		Lng	0.019	0.063			
		Elv	0.026	0.066			

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
103	1219	Lat	0.014	0.062	1:998633	1:739728	19972.663
		Lng	0.020	0.062			
		Elv	0.027	0.064			
104	0105	Lat	0.014	0.076	1:1302920	1:952134	24755.503
		Lng	0.019	0.076			
		Elv	0.026	0.078			
105	1218	Lat	0.011	0.060	1:1384217	1:1019949	19379.046
		Lng	0.014	0.060			
		Elv	0.019	0.062			
106	1218	Lat	0.014	0.097	1:1760376	1:1173584	31686.780
		Lng	0.018	0.097			
		Elv	0.027	0.099			
107	1222	Lat	0.013	0.040	1:711144	1:512024	12800.594
		Lng	0.018	0.040			
		Elv	0.025	0.044			
108	1221	Lat	0.015	0.042	1:629474	1:489591	13218.972
		Lng	0.021	0.042			
		Elv	0.027	0.045			
109	1218	Lat	0.010	0.063	1:1575779	1:1078165	20485.138
		Lng	0.013	0.063			
		Elv	0.019	0.066			
110	1222	Lat	0.012	0.064	1:1377852	1:984180	20667.793
		Lng	0.015	0.064			
		Elv	0.021	0.066			
111	1200	Lat	0.008	0.012	1:239924	1:127018	2159.317
		Lng	0.009	0.012			
		Elv	0.017	0.021			
112	0132	Lat	0.011	0.032	1:776445	1:458808	10093.788
		Lng	0.013	0.032			
		Elv	0.022	0.037			
113	1228	Lat	0.015	0.092	1:1433616	1:1038136	30105.928
		Lng	0.021	0.092			
		Elv	0.029	0.094			
114	1229	Lat	0.014	0.077	1:1388008	1:999365	24984.143
		Lng	0.018	0.077			
		Elv	0.025	0.079			
115	1230	Lat	0.013	0.063	1:1129674	1:813365	20334.129
		Lng	0.018	0.063			
		Elv	0.025	0.065			



AZIMUTH 0304

AZ 0304 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1204 1229.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position			95% Error	Fix Status
1	1204	McCANN/PLILER	Lat.	32° 34'	12.58712" N	0.000	Fixed
			Lon.	94° 46'	25.04225" W	0.000	Fixed
			Elv.		399.481	0.000	Fixed
2	1229	FM2275/FM1845	Lat.	32° 33'	23.75759" N	0.000	Fixed
			Lon.	94° 49'	53.20630" W	0.000	Fixed
			Elv.		400.177	0.000	Fixed
3	1329	FM2275/FM1845 AZ	Lat.	32° 34'	00.65135" N	0.008	
			Lon.	94° 50'	25.44375" W	0.009	
			Elv.		388.560	0.017	
4	1304	McCANN/PLILER AZ	Lat.	32° 34'	29.10667" N	0.006	
			Lon.	94° 46'	33.28607" W	0.006	

AZ 0304 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1204 1229.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

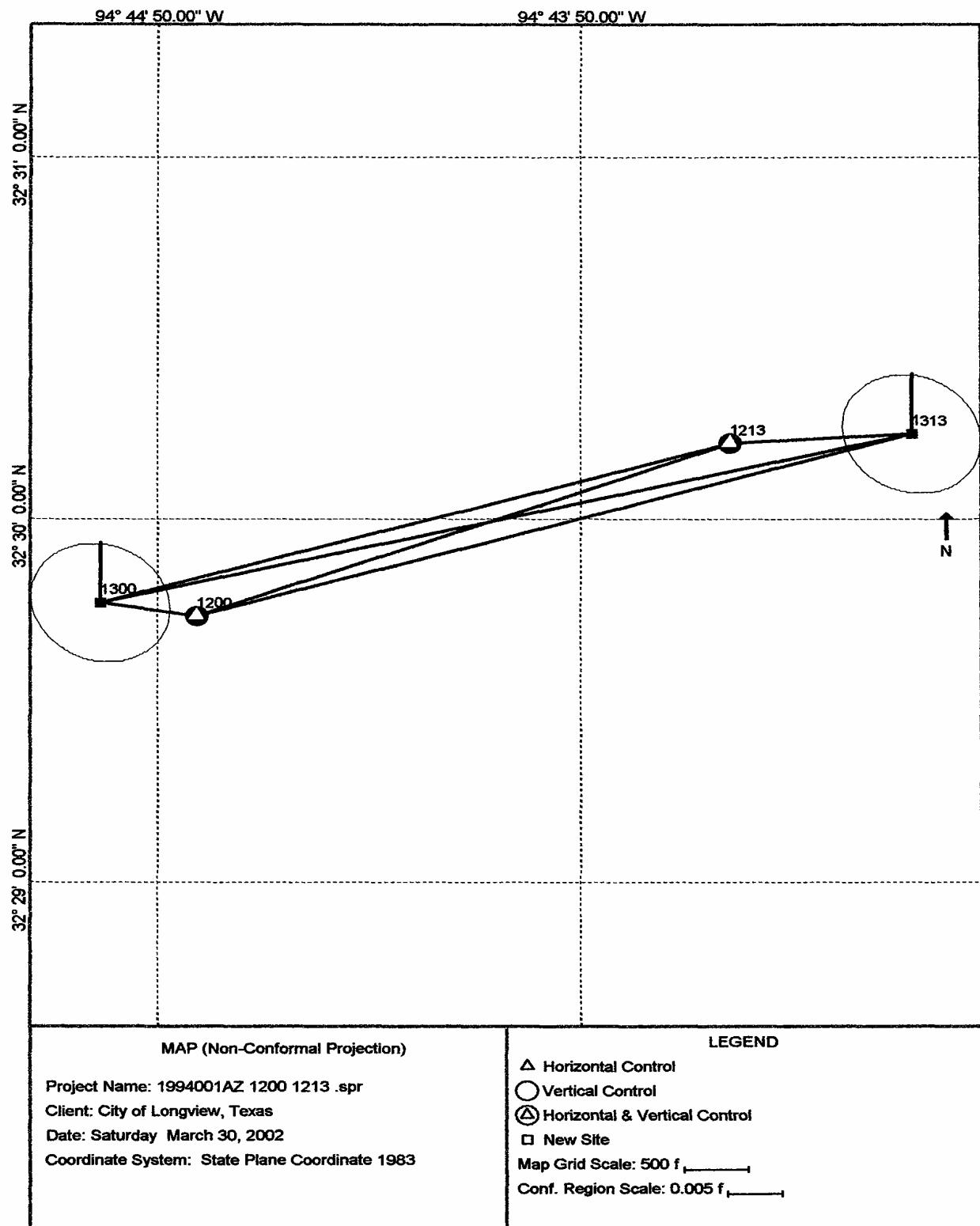
	Site ID	Site Descriptor	Position	95% Error	Fix Status
1 1204		McCANN/PLILER	East.	3116184.797	0.000 Fixed
			Nrth.	6910727.563	0.000 Fixed
			Elev.	399.481	0.000 Fixed
2 1229		FM2275/FM1845	East.	3098555.396	0.000 Fixed
			Nrth.	6905169.266	0.000 Fixed
			Elev.	400.177	0.000 Fixed
3 1329		FM2275/FM1845 AZ	East.	3095668.224	0.009
			Nrth.	6908799.119	0.008
			Elev.	388.560	0.017
4 1304		McCANN/PLILER AZ	East.	3115420.647	0.006
			Nrth.	6912370.900	0.006
			Elev.	418.674	0.013

	Site ID	Site Descriptor	Convergence	Scale Factor
1 1204		McCANN/PLILER	2 01.941	0.99990769
2 1229		FM2275/FM1845	2 00.049	0.99990970
3 1329		FM2275/FM1845 AZ	1 59.755	0.99990818
4 1304		McCANN/PLILER AZ	2 01.866	0.99990703

AZ 0304 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 5ppm Date:03/30/02
Desired Vertical Accuracy: 0.066USft + 5ppm
Project file: 1994001AZ 0104.spr
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	0104	Lat	0.006	0.011	1:392845	1:294634	2357.076
	0304	Lng	0.006	0.011			
		Elv	0.008	0.020			
2	0104	Lat	0.000	0.022	1:0	1:0	12578.851
	1230	Lng	0.000	0.022			
		Elv	0.000	0.028			
3	1230	Lat	0.006	0.019	1:1740343	1:1305257	10442.064
	0304	Lng	0.006	0.019			
		Elv	0.008	0.026			



AZIMUTH 1300 AND 1313

AZ 1300 / 1313 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1200 1213 .spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1213	WELLNESS	Lat. 32° 30' 12.32531" N Lon. 94° 43' 28.53056" W Elv. 378.036	0.000 0.000 0.000	Fixed Fixed Fixed
2	1200	CITY HALL	Lat. 32° 29' 43.83841" N Lon. 94° 44' 44.30433" W Elv. 318.762	0.000 0.000 0.000	Fixed Fixed Fixed
3	1300	CITY HALL AZ	Lat. 32° 29' 46.04110" N Lon. 94° 44' 58.24598" W Elv. 295.822	0.006 0.006 0.006	
4	1313	WELLNESS AZ	Lat. 32° 30' 14.09511" N Lon. 94° 43' 02.99575" W Elv. 377.359	0.006 0.006 0.006	

AZ 1300 / 1313 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1200 1213 .spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

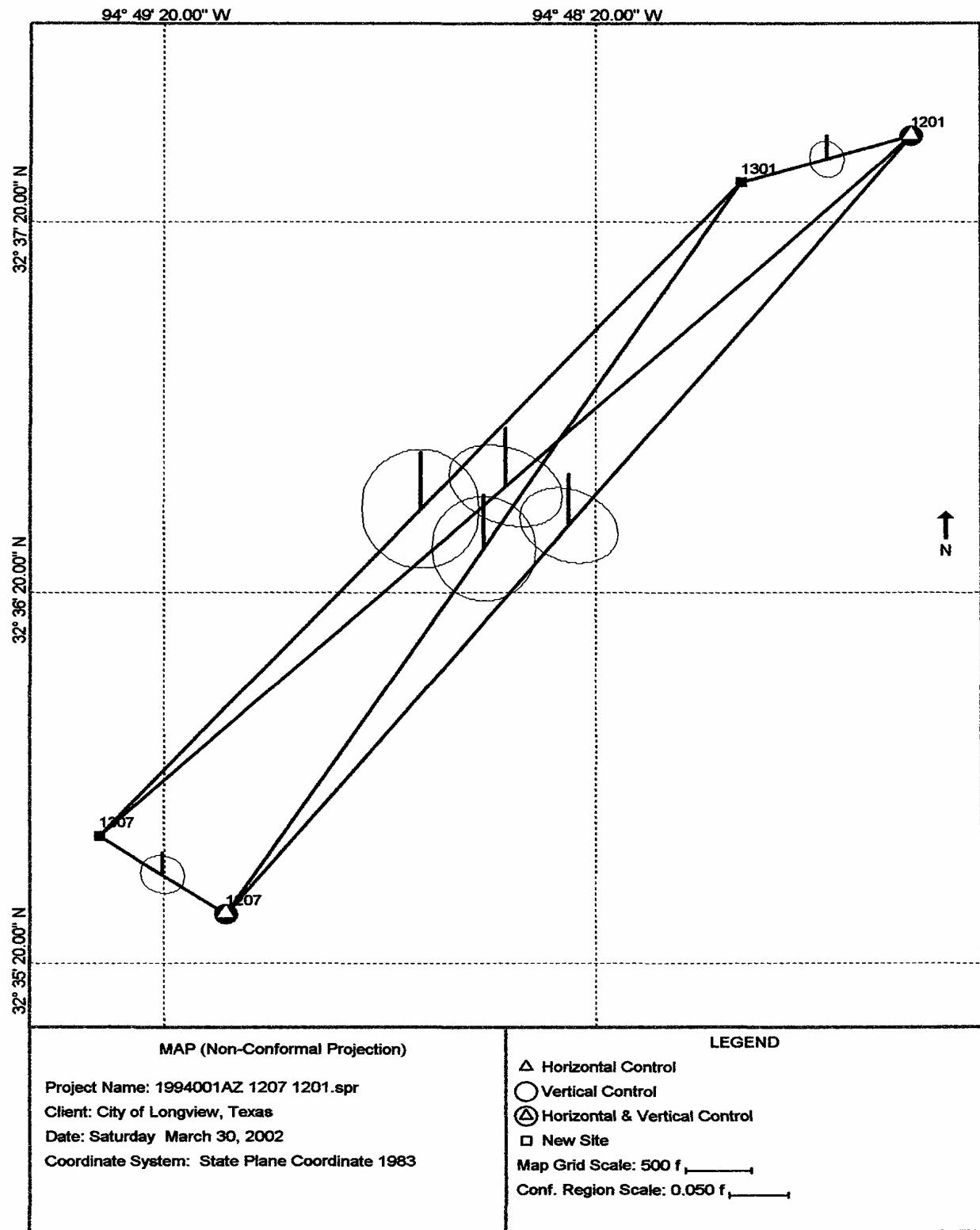
	Site ID	Site Descriptor		Position	95% Error	Fix Status
1	1213	WELLNESS	East.	3132151.752	0.000	Fixed
			Nrth.	6887002.599	0.000	Fixed
			Elev.	378.036	0.000	Fixed
2	1200	CITY HALL	East.	3125769.908	0.000	Fixed
			Nrth.	6883893.178	0.000	Fixed
			Elev.	318.762	0.000	Fixed
3	1300	CITY HALL AZ	East.	3124568.728	0.006	
			Nrth.	6884072.992	0.006	
			Elev.	295.822	0.006	
4	1313	WELLNESS AZ	East.	3134330.567	0.006	
			Nrth.	6887259.972	0.006	
			Elev.	377.359	0.006	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1213	WELLNESS	2 03.545	0.99991808
2	1200	CITY HALL	2 02.856	0.99991940
3	1300	CITY HALL AZ	2 02.730	0.99991930
4	1313	WELLNESS AZ	2 03.777	0.99991800

AZ 1300 / 1313 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1200 1213 .spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1200	Lat	0.007	0.011	1:173556	1:173556	1214.892
	1300	Lng	0.007	0.011			
		Elv	0.007	0.020			
2	1213	Lat	0.000	0.024	1:0	1:0	7099.960
	1200	Lng	0.000	0.024			
		Elv	0.000	0.030			
3	1213	Lat	0.007	0.027	1:1161490	1:1161490	8130.436
	1300	Lng	0.007	0.027			
		Elv	0.007	0.032			
4	1213	Lat	0.007	0.012	1:313453	1:313453	2194.174
	1313	Lng	0.007	0.012			
		Elv	0.007	0.021			
5	1200	Lat	0.007	0.030	1:1314282	1:1314282	9199.976
	1313	Lng	0.007	0.030			
		Elv	0.007	0.035			
6	1313	Lat	0.007	0.033	1:1467169	1:1467169	10270.187
	1300	Lng	0.007	0.033			
		Elv	0.007	0.037			



AZIMUTH 1301 AND 1307

AZ 1301 / 1307 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1207 1201.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1201	MACKEY RD	Lat. 32° 37' 33.92731" N Lon. 94° 47' 36.14935" W Elv. 368.879	0.000 0.000 0.000	Fixed Fixed Fixed
2	1207	SH300/FM1844	Lat. 32° 35' 27.90371" N Lon. 94° 49' 11.33388" W Elv. 435.813	0.000 0.000 0.000	Fixed Fixed Fixed
3	1307	SH300/FM1844 AZ	Lat. 32° 35' 40.63493" N Lon. 94° 49' 29.19850" W Elv. 454.240	0.011 0.010 0.014	
4	1301	MACKEY RD AZ	Lat. 32° 37' 26.22855" N Lon. 94° 47' 59.92876" W Elv. 375.302	0.010 0.008 0.012	

AZ 1301 / 1307 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1207 1201.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

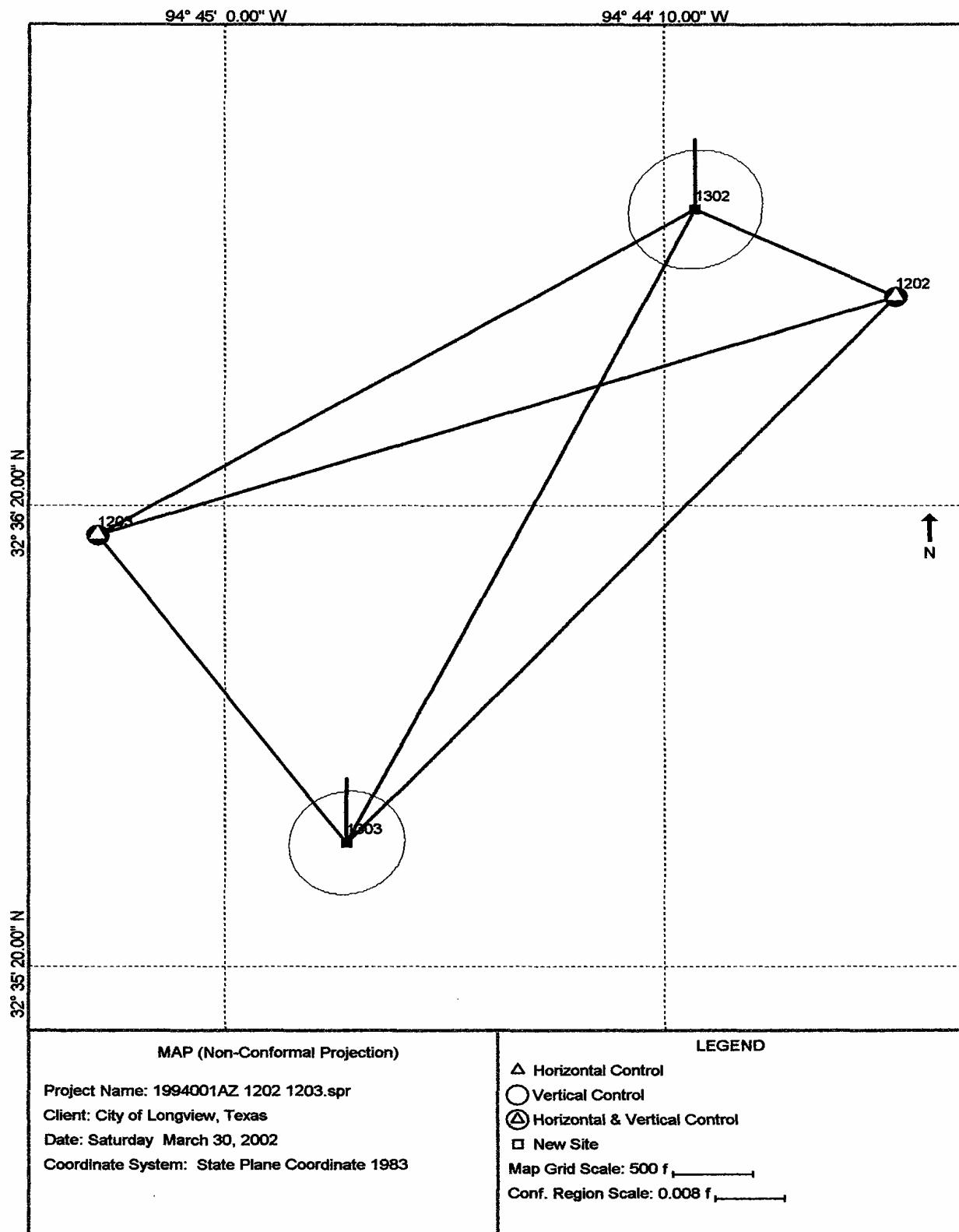
	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1201	MACKEY RD	East. 3109386.188 Nrth. 6930846.268 Elev. 368.879	0.000 0.000 0.000	Fixed Fixed Fixed
2	1207	SH300/FM1844	East. 3101697.394 Nrth. 6917832.555 Elev. 435.813	0.000 0.000 0.000	Fixed Fixed Fixed
3	1307	SH300/FM1844 AZ	East. 3100125.004 Nrth. 6919064.837 Elev. 454.240	0.010 0.011 0.014	
4	1301	MACKEY RD AZ	East. 3107381.309 Nrth. 6929997.076 Elev. 375.302	0.008 0.010 0.012	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1201	MACKEY RD	2 01.294	0.99990002
2	1207	SH300/FM1844	2 00.429	0.99990471
3	1307	SH300/FM1844 AZ	2 00.267	0.99990422
4	1301	MACKEY RD AZ	2 01.078	0.99990030

AZ 1301 / 1307 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1207 1201.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1207	Lat	0.011	0.012	1:181639	1:142716	1998.032
	1307	Lng	0.010	0.012			
		Elv	0.014	0.021			
2	1207	Lat	0.000	0.047	1:0	1:0	15117.148
	1201	Lng	0.000	0.047			
		Elv	0.000	0.050			
3	1201	Lat	0.011	0.047	1:1362508	1:1070542	14987.588
	1307	Lng	0.010	0.047			
		Elv	0.014	0.050			
4	1207	Lat	0.010	0.042	1:1342853	1:1119044	13428.519
	1301	Lng	0.008	0.042			
		Elv	0.012	0.046			
5	1201	Lat	0.010	0.012	1:217755	1:181462	2177.554
	1301	Lng	0.008	0.012			
		Elv	0.012	0.021			
6	1301	Lat	0.014	0.041	1:937352	1:771937	13122.938
	1307	Lng	0.013	0.041			
		Elv	0.017	0.045			



AZIMUTH 1302 AND 1303

AZ 1302 / 1303 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date 03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1202 1203.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1202	FM 449	Lat. 32° 36' 46.99707" N Lon. 94° 43' 43.78804" W Elv. 432.906	0.000 0.000 0.000	Fixed Fixed Fixed
2	1203	US259/JUDSON	Lat. 32° 36' 16.07526" N Lon. 94° 45' 14.74191" W Elv. 401.175	0.000 0.000 0.000	Fixed Fixed Fixed
3	1303	US259/JUDSON AZ	Lat. 32° 35' 36.04133" N Lon. 94° 44' 46.17805" W Elv. 432.536	0.007 0.006 0.008	
4	1302	FM 449 AZ	Lat. 32° 36' 58.38532" N Lon. 94° 44' 06.47209" W Elv. 417.623	0.008 0.008 0.009	

AZ 1302 / 1303 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1202 1203.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

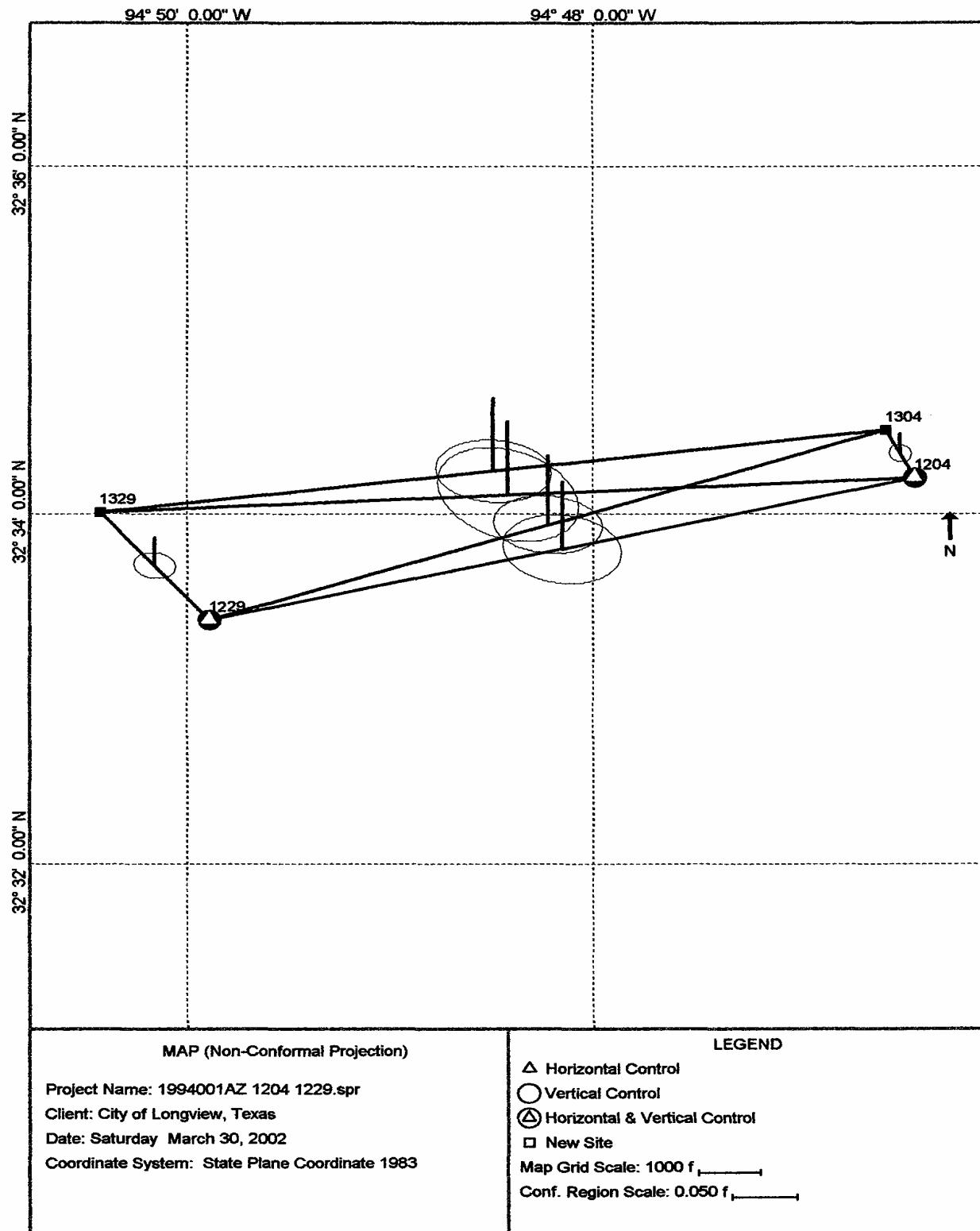
	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1202	FM 449	East. 3129414.602 Nrth. 6926813.809 Elev. 432.906	0.000 0.000 0.000	Fixed Fixed Fixed
2	1203	US259/JUDSON	East. 3121751.758 Nrth. 6923412.708 Elev. 401.175	0.000 0.000 0.000	Fixed Fixed Fixed
3	1303	US259/JUDSON AZ	East. 3124338.015 Nrth. 6919456.827 Elev. 432.536	0.006 0.007 0.008	
4	1302	FM 449 AZ	East. 3127434.464 Nrth. 6927894.345 Elev. 417.623	0.008 0.008 0.009	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1202	FM 449	2 03.407	0.99990173
2	1203	US259/JUDSON	2 02.580	0.99990288
3	1303	US259/JUDSON AZ	2 02.839	0.99990440
4	1302	FM 449 AZ	2 03.200	0.99990131

AZ 1302 / 1303 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date 03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1202 1203.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1203	Lat	0.007	0.018	1:675272	1:590863	4726.906
	1303	Lng	0.006	0.018			
		Elv	0.008	0.025			
2	1202	Lat	0.007	0.029	1:1277072	1:1117438	8939.506
	1303	Lng	0.006	0.029			
		Elv	0.008	0.034			
3	1202	Lat	0.000	0.027	1:0	1:0	8384.711
	1203	Lng	0.000	0.027			
		Elv	0.000	0.033			
4	1202	Lat	0.008	0.012	1:282009	1:250675	2256.078
	1302	Lng	0.008	0.012			
		Elv	0.009	0.021			
5	1203	Lat	0.008	0.024	1:904762	1:804233	7238.106
	1302	Lng	0.008	0.024			
		Elv	0.009	0.030			
6	1302	Lat	0.011	0.029	1:817160	1:817160	8988.768
	1303	Lng	0.010	0.029			
		Elv	0.011	0.034			



AZIMUTH 1304 AND 1329

AZ 1304 / 1329 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1204 1229.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1204	McCANN/PLILER	Lat. 32° 34' 12.58712" N Lon. 94° 46' 25.04225" W Elv. 399.481	0.000 0.000 0.000	Fixed Fixed Fixed
2	1229	FM2275/FM1845	Lat. 32° 33' 23.75759" N Lon. 94° 49' 53.20630" W Elv. 400.177	0.000 0.000 0.000	Fixed Fixed Fixed
3	1329	FM2275/FM1845 AZ	Lat. 32° 34' 00.65135" N Lon. 94° 50' 25.44375" W Elv. 388.560	0.008 0.009 0.017	
4	1304	McCANN/PLILER AZ	Lat. 32° 34' 29.10667" N Lon. 94° 46' 33.28607" W Elv. 418.674	0.006 0.006 0.013	

AZ 1304 / 1329 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1204 1229.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

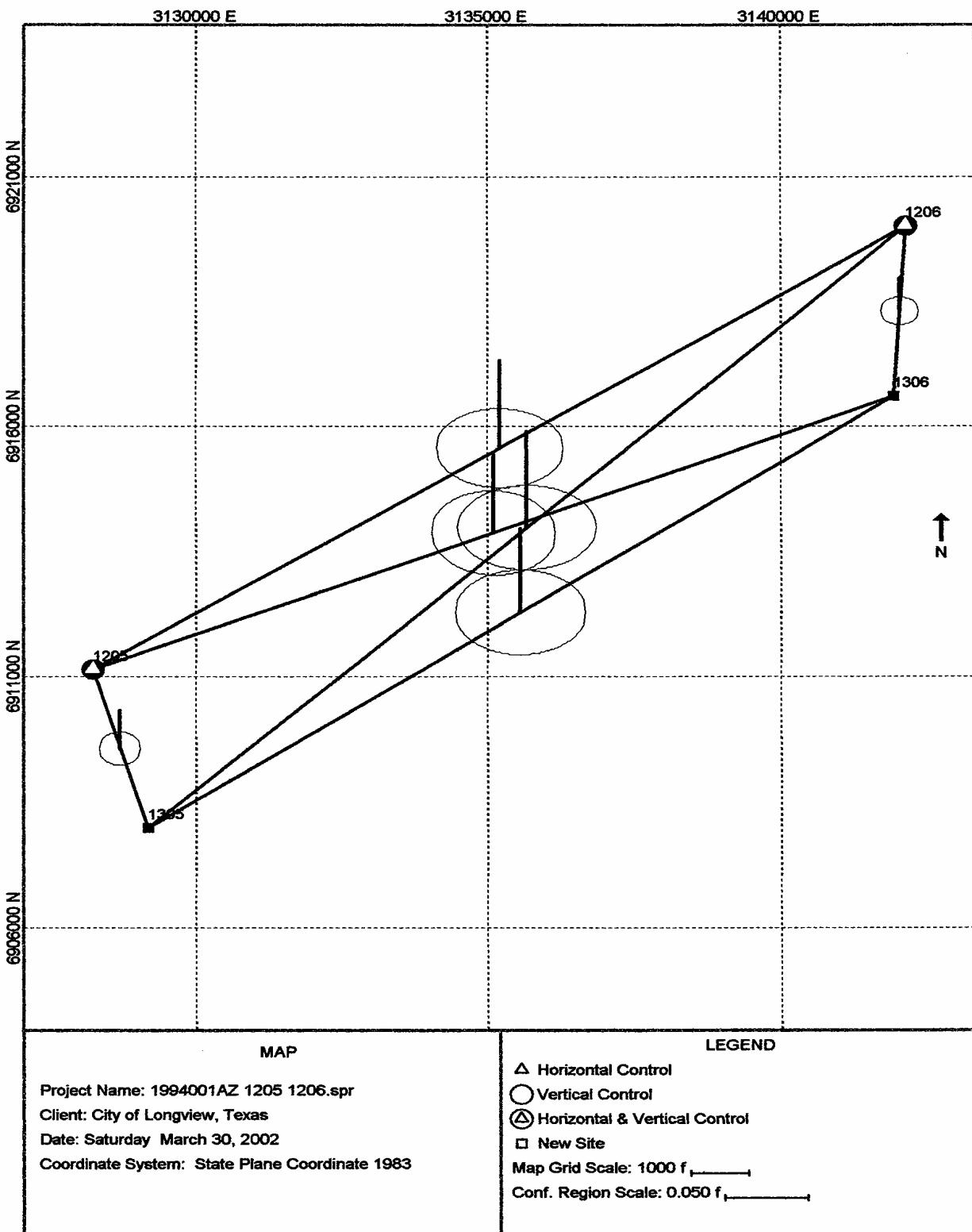
	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1204	McCANN/PLILER	East. 3116184.797 Nrth. 6910727.563 Elev. 399.481	0.000 0.000 0.000	Fixed Fixed Fixed
2	1229	FM2275/FM1845	East. 3098555.396 Nrth. 6905169.266 Elev. 400.177	0.000 0.000 0.000	Fixed Fixed Fixed
3	1329	FM2275/FM1845 AZ	East. 3095668.224 Nrth. 6908799.119 Elev. 388.560	0.009 0.008 0.017	
4	1304	McCANN/PLILER AZ	East. 3115420.647 Nrth. 6912370.900 Elev. 418.674	0.006 0.006 0.013	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1204	McCANN/PLILER	2 01.941	0.99990769
2	1229	FM2275/FM1845	2 00.049	0.99990970
3	1329	FM2275/FM1845 AZ	1 59.755	0.99990818
4	1304	McCANN/PLILER AZ	2 01.866	0.99990703

AZ 1304 / 1329 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:03/30/02
Desired Vertical Accuracy: 0.066USft + 10ppm
Project file: 1994001AZ 1204 1229.spr
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1229	Lat	0.000	0.057	1:0	1:0	18486.758
	1204	Lng	0.000	0.057			
		Elv	0.000	0.060			
2	1229	Lat	0.008	0.017	1:515393	1:272855	4638.545
	1329	Lng	0.009	0.017			
		Elv	0.017	0.025			
3	1204	Lat	0.008	0.064	1:2289903	1:1212301	20609.121
	1329	Lng	0.009	0.064			
		Elv	0.017	0.066			
4	1229	Lat	0.006	0.057	1:3056730	1:1410798	18340.386
	1304	Lng	0.006	0.057			
		Elv	0.013	0.059			
5	1204	Lat	0.006	0.011	1:302100	1:139430	1812.604
	1304	Lng	0.006	0.011			
		Elv	0.013	0.021			
6	1329	Lat	0.008	0.062	1:2007485	1:1338323	20074.859
	1304	Lng	0.010	0.062			
		Elv	0.015	0.064			



AZIMUTH 1305 AND 1306

AZ 1305 / 1306 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1205 1206.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1205	KAWASAKI	Lat. 32° 34' 12.55134" N Lon. 94° 44' 04.45884" W Elv. 397.596	0.000 0.000 0.000	Fixed Fixed Fixed
2	1206	FM 2879	Lat. 32° 35' 35.06971" N Lon. 94° 41' 17.53087" W Elv. 387.657	0.000 0.000 0.000	Fixed Fixed Fixed
3	1305	KAWASAKI AZ	Lat. 32° 33' 40.71312" N Lon. 94° 43' 54.38532" W Elv. 391.284	0.006 0.006 0.006	
4	1306	FM 2879 AZ	Lat. 32° 35' 01.54744" N Lon. 94° 41' 21.37597" W Elv. 387.870	0.006 0.006 0.006	

AZ 1305 / 1306 CONTROL GRID POSITIONS

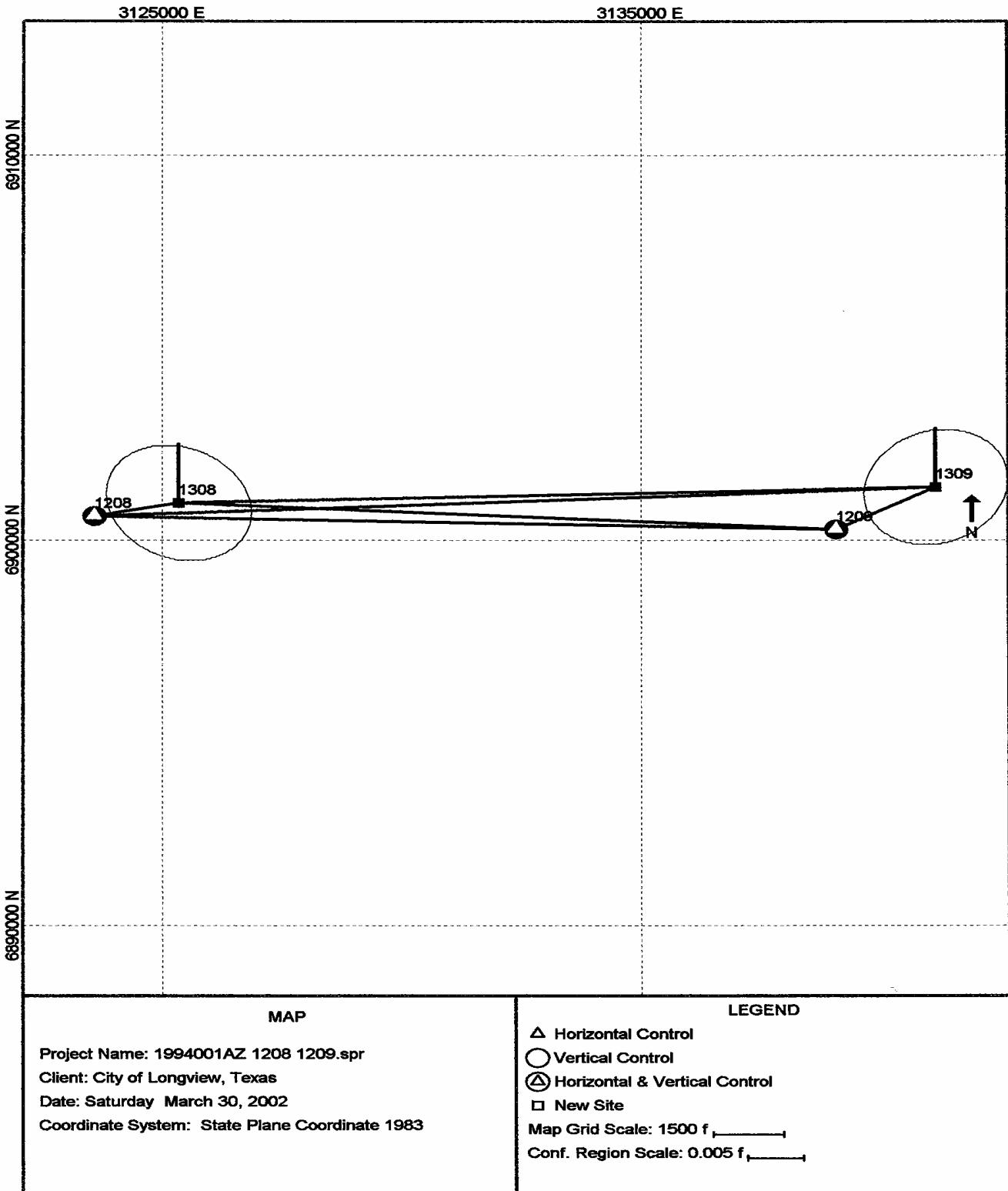
Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1205 1206.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1205	KAWASAKI	East. 3128207.082 Nrth. 6911152.806 Elev. 397.596	0.000 0.000 0.000	Fixed Fixed Fixed
2	1206	FM 2879	East. 3142179.410 Nrth. 6920001.292 Elev. 387.657	0.000 0.000 0.000	Fixed Fixed Fixed
3	1305	KAWASAKI AZ	East. 3129183.908 Nrth. 6907968.344 Elev. 391.284	0.006 0.006 0.006	
4	1306	FM 2879 AZ	East. 3141973.539 Nrth. 6916603.973 Elev. 387.870	0.006 0.006 0.006	
	Site ID	Site Descriptor	Convergence	Scale Factor	
1	1205	KAWASAKI	2 03.219	0.99990769	
2	1206	FM 2879	2 04.736	0.99990444	
3	1305	KAWASAKI AZ	2 03.310	0.99990899	
4	1306	FM 2879 AZ	2 04.701	0.99990574	

AZ 1305 / 1305 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1205 1206.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1205	Lat	0.007	0.014	1:475895	1:475895	3331.265
	1305	Lng	0.006	0.014			
		Elv	0.007	0.023			
2	1205	Lat	0.007	0.046	1:2115428	1:2115428	14807.997
	1306	Lng	0.006	0.046			
		Elv	0.007	0.049			
3	1306	Lat	0.007	0.048	1:2204811	1:2204811	15433.681
	1305	Lng	0.006	0.048			
		Elv	0.007	0.051			
4	1206	Lat	0.007	0.055	1:2530390	1:2530390	17712.731
	1305	Lng	0.006	0.055			
		Elv	0.007	0.058			
5	1206	Lat	0.007	0.014	1:486273	1:486273	3403.914
	1306	Lng	0.006	0.014			
		Elv	0.007	0.023			
6	1206	Lat	0.000	0.051	1:0	1:0	16540.244
	1205	Lng	0.000	0.051			
		Elv	0.000	0.054			



AZIMUTH 1308 AND 1309

AZ 1308 / 1309 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1208 1209.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1208	MALL/TUTTLE	Lat. 32° 32' 29.99250" N Lon. 94° 45' 02.88229" W Elv. 349.735	0.000 0.000 0.000	Fixed Fixed Fixed
2	1209	FM2208/FM2879	Lat. 32° 32' 21.11573" N Lon. 94° 42' 02.02524" W Elv. 411.924	0.000 0.000 0.000	Fixed Fixed Fixed
3	1308	MALL/TUTTLE AZ	Lat. 32° 32' 32.84626" N Lon. 94° 44' 42.06414" W Elv. 384.370	0.006 0.006 0.006	
4	1309	FM2208/FM2879 AZ	Lat. 32° 32' 31.41713" N Lon. 94° 41' 37.21465" W Elv. 424.433	0.006 0.006 0.006	

AZ 1308 / 1309 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1208 1209.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

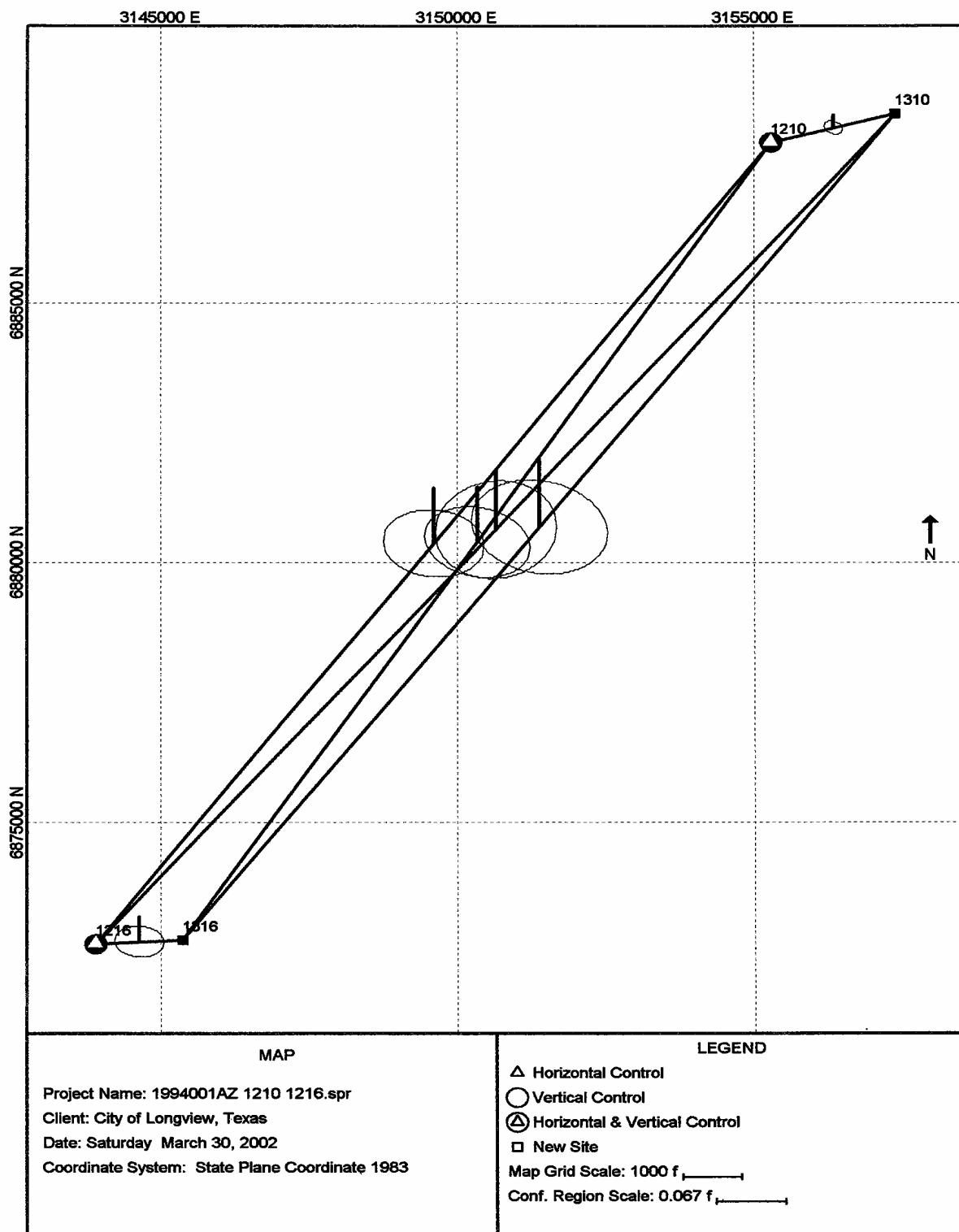
	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1208	MALL/TUTTLE	East. 3123580.752 Nrth. 6900616.487 Elev. 349.735	0.000 0.000 0.000	Fixed Fixed Fixed
2	1209	FM2208/FM2879	East. 3139084.195 Nrth. 6900276.100 Elev. 411.924	0.000 0.000 0.000	Fixed Fixed Fixed
3	1308	MALL/TUTTLE AZ	East. 3125351.301 Nrth. 6900968.324 Elev. 384.370	0.006 0.006 0.006	
4	1309	FM2208/FM2879 AZ	East. 3141168.889 Nrth. 6901393.294 Elev. 424.433	0.006 0.006 0.006	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1208	MALL/TUTTLE	2 02.688	0.99991196
2	1209	FM2208/FM2879	2 04.332	0.99991234
3	1308	MALL/TUTTLE AZ	2 02.877	0.99991184
4	1309	FM2208/FM2879 AZ	2 04.557	0.99991190

AZ 1308 / 1309 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1208 1209.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1208	Lat	0.007	0.011	1:257953	1:257953	1805.672
	1308	Lng	0.006	0.011			
		Elv	0.007	0.021			
2	1209	Lat	0.007	0.043	1:1964524	1:1964524	13751.678
	1308	Lng	0.006	0.043			
		Elv	0.007	0.046			
3	1209	Lat	0.000	0.048	1:0	1:0	15508.781
	1208	Lng	0.000	0.048			
		Elv	0.000	0.051			
4	1209	Lat	0.007	0.012	1:337920	1:337920	2365.442
	1309	Lng	0.006	0.012			
		Elv	0.007	0.021			
5	1208	Lat	0.007	0.055	1:2515304	1:2515304	17607.127
	1309	Lng	0.006	0.055			
		Elv	0.007	0.057			
6	1309	Lat	0.006	0.049	1:2637478	1:2260696	15824.875
	1308	Lng	0.006	0.049			
		Elv	0.007	0.052			



AZIMUTH 1310 AND 1316

AZ 1310 / 1316 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1210 1216.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1210	US80/TRINITY	Lat. 32° 30' 14.44539" N Lon. 94° 38' 58.10826" W Elv. 340.412	0.000 0.000 0.000	Fixed Fixed Fixed
2	1216	NEIMAN MARCUS	Lat. 32° 27' 46.33039" N Lon. 94° 41' 17.62337" W Elv. 330.911	0.000 0.000 0.000	Fixed Fixed Fixed
3	1310	US80/TRINITY AZ	Lat. 32° 30' 19.40891" N Lon. 94° 38' 33.45714" W Elv. 368.220	0.006 0.006 0.006	
4	1316	NEIMAN MARCUS AZ	Lat. 32° 27' 46.62558" N Lon. 94° 41' 00.24025" W Elv. 347.636	0.006 0.006 0.006	

AZ 1310 / 1316 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1210 1216.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

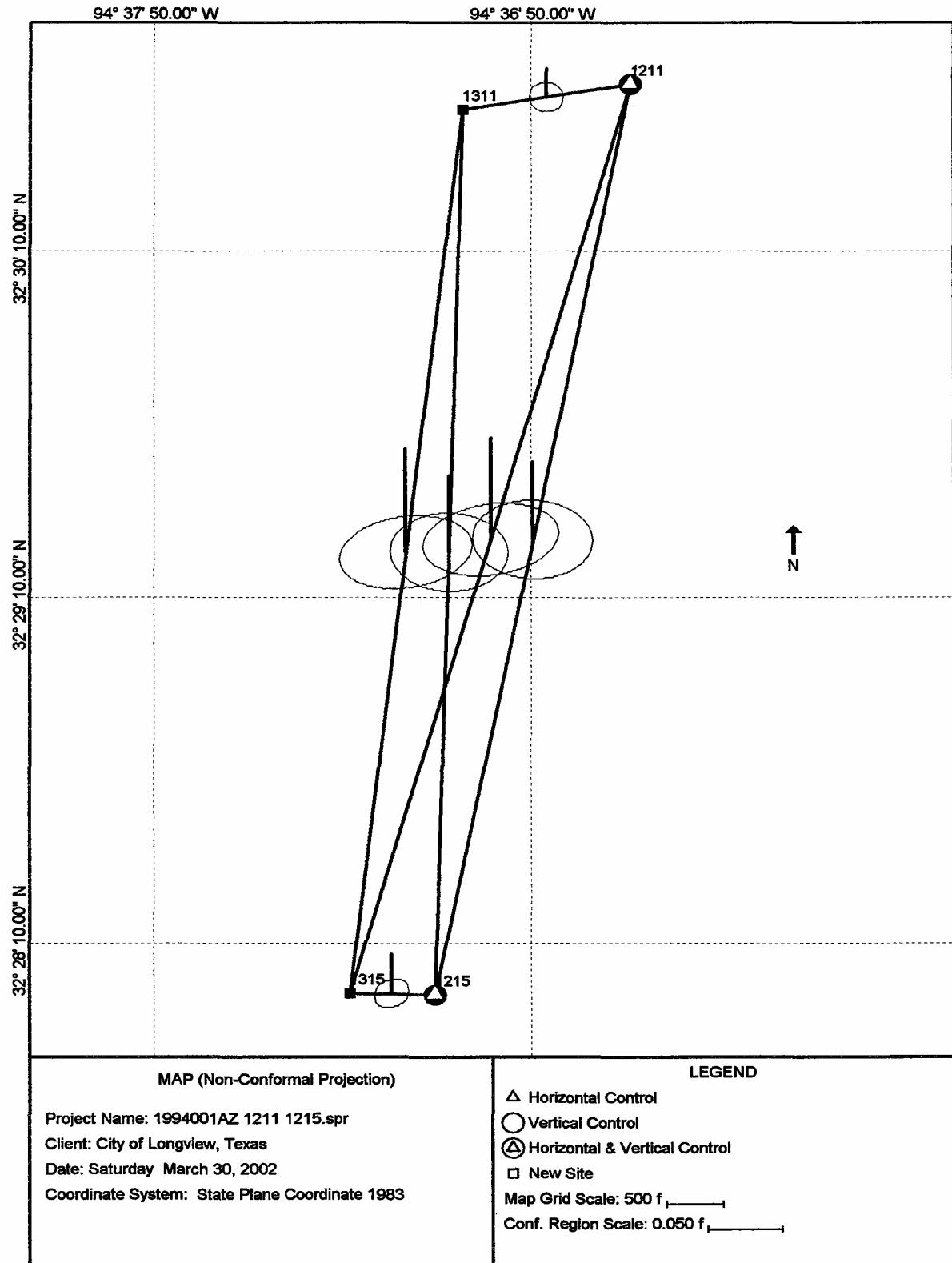
	Site ID	Site Descriptor	Position	95% Error	Fix Status
1 1210		US80/TRINITY	East.	3155286.198	0.000 Fixed
			Nrth.	6888057.028	0.000 Fixed
			Elev.	340.412	0.000 Fixed
2 1216		NEIMAN MARCUS	East.	3143889.853	0.000 Fixed
			Nrth.	6872663.417	0.000 Fixed
			Elev.	330.911	0.000 Fixed
3 1310		US80/TRINITY AZ	East.	3157377.344	0.006
			Nrth.	6888635.706	0.006
			Elev.	368.220	0.006
4 1316		NEIMAN MARCUS AZ	East.	3145377.065	0.006
			Nrth.	6872747.287	0.006
			Elev.	347.636	0.006

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1210	US80/TRINITY	2 06.003	0.99991798
2	1216	NEIMAN MARCUS	2 04.735	0.99992505
3	1310	US80/TRINITY AZ	2 06.227	0.99991775
4	1316	NEIMAN MARCUS AZ	2 04.893	0.99992503

AZ 1310 / 1316 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1210 1216.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1210	Lat	0.007	0.012	1:310015	1:310015	2170.110
	1310	Lng	0.007	0.012			
		Elv	0.007	0.021			
2	1210	Lat	0.007	0.056	1:2605473	1:2605473	18238.319
	1316	Lng	0.006	0.056			
		Elv	0.007	0.059			
3	1310	Lat	0.006	0.062	1:3318791	1:2844678	19912.752
	1316	Lng	0.006	0.062			
		Elv	0.007	0.064			
4	1210	Lat	0.000	0.059	1:0	1:0	19154.706
	1216	Lng	0.000	0.059			
		Elv	0.000	0.062			
5	1216	Lat	0.007	0.011	1:212827	1:212827	1489.792
	1316	Lng	0.006	0.011			
		Elv	0.007	0.021			
6	1216	Lat	0.007	0.065	1:2986717	1:2986717	20907.014
	1310	Lng	0.007	0.065			
		Elv	0.007	0.067			



AZIMUTH 1311 AND 1315

AZ 1311 / 1315 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1211 1215.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

		Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1211		HALLSVILLE	Lat. 32° 30' 38.86848" N Lon. 94° 36' 34.14521" W Elv. 396.268	0.000 0.000 0.000	Fixed Fixed Fixed
2	1215		INT 20/LANSING	Lat. 32° 28' 01.15751" N Lon. 94° 37' 04.91978" W Elv. 340.837	0.000 0.000 0.000	Fixed Fixed Fixed
3	1311		HALLSVILLE AZ	Lat. 32° 30' 34.40434" N Lon. 94° 37' 00.71256" W Elv. 398.600	0.006 0.006 0.008	
4	1315		IH20/LANSING AZ	Lat. 32° 28' 01.27339" N Lon. 94° 37' 18.56403" W Elv. 374.750	0.006 0.006 0.011	

AZ 1311 / 1315 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1211 1215.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

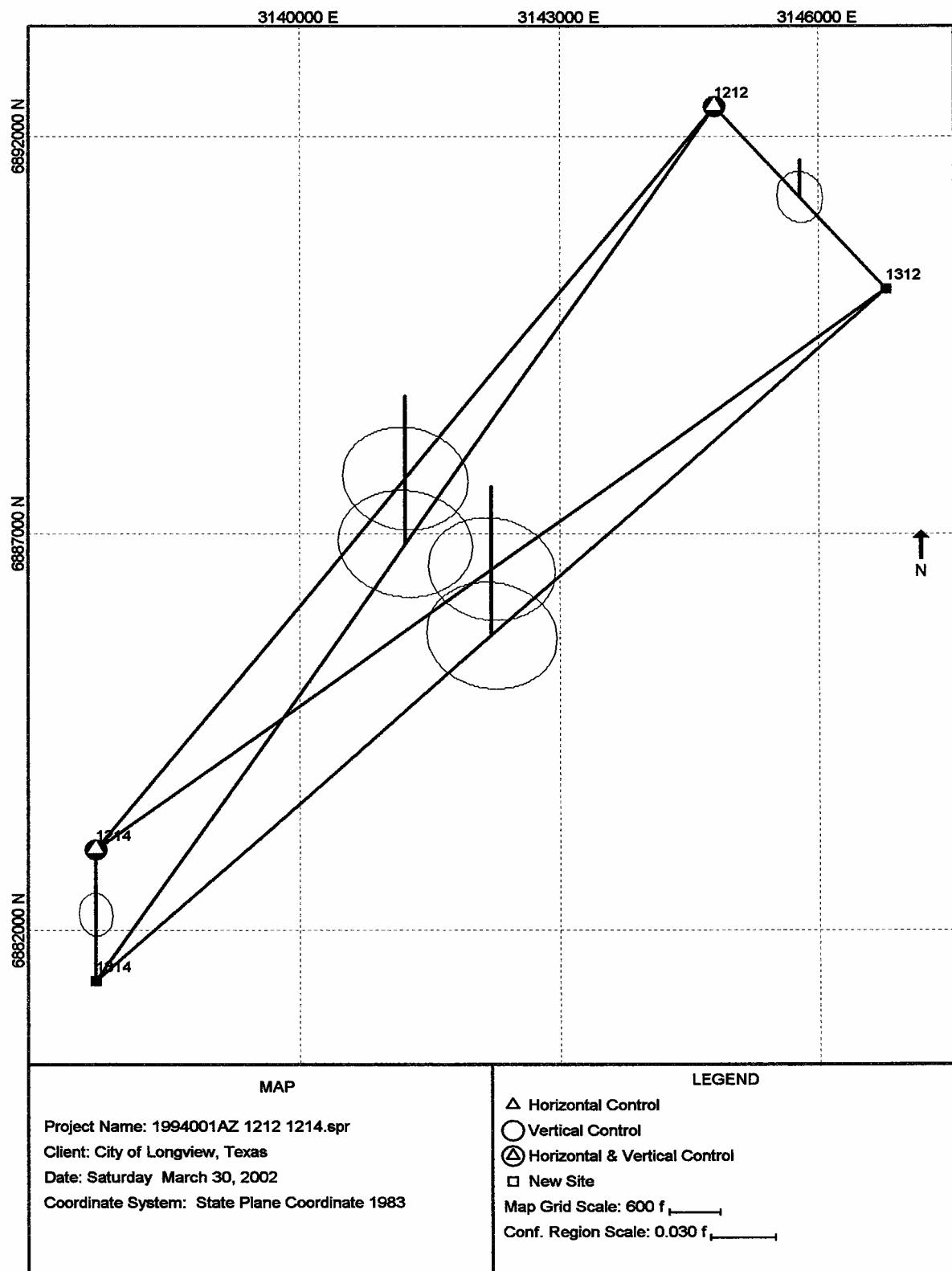
	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1211	HALLSVILLE	East. 3167514.611 Nrth. 6890977.533 Elev. 396.268	0.000 0.000 0.000	Fixed Fixed Fixed
2	1215	INT 20/LANSING	East. 3165470.053 Nrth. 6874953.365 Elev. 340.837	0.000 0.000 0.000	Fixed Fixed Fixed
3	1311	HALLSVILLE AZ	East. 3165257.939 Nrth. 6890442.567 Elev. 398.600	0.006 0.006 0.008	
4	1315	IH20/LANSING AZ	East. 3164301.519 Nrth. 6874921.905 Elev. 374.750	0.006 0.006 0.011	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1211	HALLSVILLE	2 07.312	0.99991687
2	1215	INT 20/LANSING	2 07.032	0.99992432
3	1311	HALLSVILLE AZ	2 07.070	0.99991707
4	1315	IH20/LANSING AZ	2 06.908	0.99992431

AZ 1311 / 1315 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1211 1215.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1211	Lat	0.006	0.012	1:386574	1:289930	2319.444
	1311	Lng	0.006	0.012			
		Elv	0.008	0.021			
2	1215	Lat	0.006	0.048	1:2582035	1:1936526	15492.211
	1311	Lng	0.006	0.048			
		Elv	0.008	0.051			
3	1215	Lat	0.000	0.050	1:0	1:0	16155.683
	1211	Lng	0.000	0.050			
		Elv	0.000	0.053			
4	1215	Lat	0.006	0.011	1:167079	1:106323	1169.554
	1315	Lng	0.007	0.011			
		Elv	0.011	0.020			
5	1211	Lat	0.006	0.051	1:2339362	1:1488685	16375.539
	1315	Lng	0.007	0.051			
		Elv	0.011	0.054			
6	1311	Lat	0.006	0.048	1:2221655	1:1196275	15551.588
	1315	Lng	0.007	0.048			
		Elv	0.013	0.051			



AZIMUTH 1312 AND 1314

AZ 1312 / 1314 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1212 1214.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1212	LOOP 281	Lat. 32° 31' 01.03142" N Lon. 94° 40' 58.87510" W Elv. 373.189	0.000 0.000 0.000	Fixed Fixed Fixed
2	1214	EASTMAN/COTTON	Lat. 32° 29' 30.93235" N Lon. 94° 42' 26.01335" W Elv. 342.412	0.000 0.000 0.000	Fixed Fixed Fixed
3	1312	LOOP 281 AZ	Lat. 32° 30' 37.59089" N Lon. 94° 40' 36.65519" W Elv. 323.383	0.006 0.006 0.006	
4	1314	EASTM/COTTON AZ	Lat. 32° 29' 14.54578" N Lon. 94° 42' 26.71078" W Elv. 336.533	0.006 0.006 0.006	

AZ 1312 / 1314 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1212 1214.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

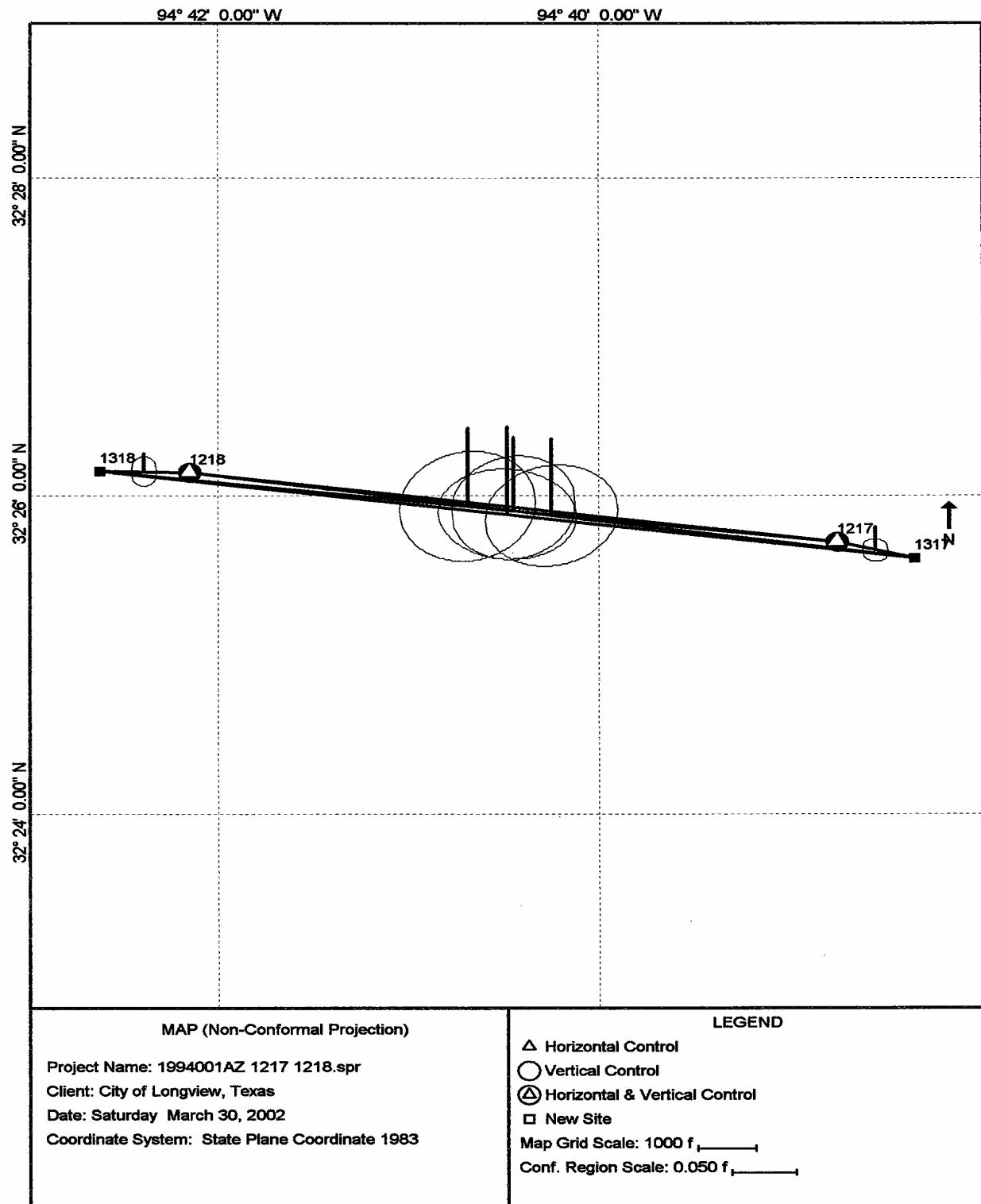
	Site ID	Site Descriptor		Position	95% Error	Fix Status
1	1212	LOOP 281	East.	3144780.300	0.000	Fixed
			Nrth.	6892384.382	0.000	Fixed
			Elev.	373.189	0.000	Fixed
2	1214	EASTMAN/COTTON	East.	3137652.912	0.000	Fixed
			Nrth.	6883015.131	0.000	Fixed
			Elev.	342.412	0.000	Fixed
3	1312	LOOP 281 AZ	East.	3146767.737	0.006	
			Nrth.	6890086.318	0.006	
			Elev.	323.383	0.006	
4	1314	EASTM/COTTON AZ	East.	3137652.988	0.006	
			Nrth.	6881358.098	0.006	
			Elev.	336.533	0.006	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1212	LOOP 281	2 04.906	0.99991586
2	1214	EASTMAN/COTTON	2 04.113	0.99992000
3	1312	LOOP 281 AZ	2 05.108	0.99991692
4	1314	EASTM/COTTON AZ	2 04.107	0.99992078

AZ 1312 / 1314 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1212 1214.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1212	Lat	0.007	0.014	1:434134	1:434134	3038.942
	1312	Lng	0.006	0.014			
		Elv	0.007	0.022			
2	1212	Lat	0.007	0.041	1:1875784	1:1641311	13130.494
	1314	Lng	0.006	0.041			
		Elv	0.008	0.045			
3	1314	Lat	0.007	0.040	1:1802995	1:1577620	12620.964
	1312	Lng	0.007	0.040			
		Elv	0.008	0.043			
4	1214	Lat	0.007	0.037	1:1648163	1:1648163	11537.143
	1312	Lng	0.006	0.037			
		Elv	0.007	0.041			
5	1214	Lat	0.007	0.011	1:236741	1:207148	1657.188
	1314	Lng	0.006	0.011			
		Elv	0.008	0.021			
6	1214	Lat	0.000	0.037	1:0	1:0	11773.212
	1212	Lng	0.000	0.037			
		Elv	0.000	0.041			



AZIMUTH 1317 AND 1318

AZ 1317 / 1318 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1217 1218.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1218	TX EASTMAN CO	Lat. 32° 26' 08.72995" N Lon. 94° 42' 09.36874" W Elv. 288.851	0.000 0.000 0.000	Fixed Fixed Fixed
2	1217	TALLEY	Lat. 32° 25' 42.06838" N Lon. 94° 38' 44.93661" W Elv. 264.400	0.000 0.000 0.000	Fixed Fixed Fixed
3	1318	TX EASTMAN AZ	Lat. 32° 26' 09.24797" N Lon. 94° 42' 38.24422" W Elv. 288.451	0.006 0.006 0.007	
4	1317	TALLEY AZ	Lat. 32° 25' 36.42923" N Lon. 94° 38' 20.36142" W Elv. 257.739	0.006 0.006 0.008	

AZ 1317 1318 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1217 1218.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1218	TX EASTMAN CO	East. 3139815.983 Nrth. 6862646.259 Elev. 288.851	0.000 0.000 0.000	Fixed Fixed Fixed
2	1217	TALLEY	East. 3157422.996 Nrth. 6860591.651 Elev. 264.400	0.000 0.000 0.000	Fixed Fixed Fixed
3	1318	TX EASTMAN AZ	East. 3137341.084 Nrth. 6862609.236 Elev. 288.451	0.006 0.006 0.007	
4	1317	TALLEY AZ	East. 3159548.781 Nrth. 6860099.492 Elev. 257.739	0.006 0.006 0.008	

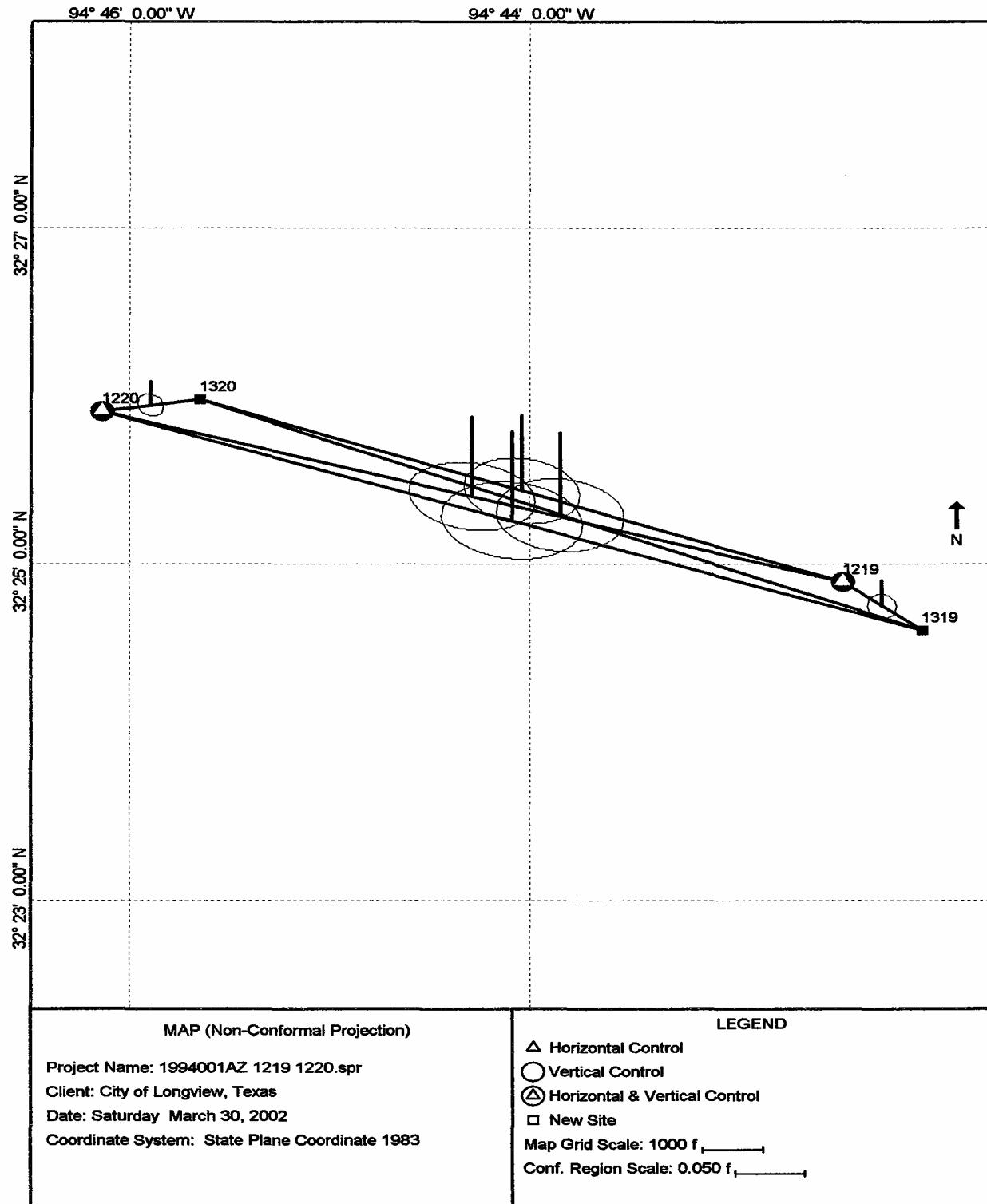
	Site ID	Site Descriptor	Convergence	Scale Factor
1	1218	TX EASTMAN CO	2 04.265	0.999992998
2	1217	TALLEY	2 06.123	0.999993136
3	1318	TX EASTMAN AZ	2 04.002	0.999992995
4	1317	TALLEY AZ	2 06.346	0.999993166

AZ 1317 1318 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1217 1218.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

Date: 03/30/02

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1217	Lat	0.007	0.062	1:2883503	1:2523065	20184.529
	1318	Lng	0.006	0.062			
		Elv	0.008	0.065			
2	1218	Lat	0.007	0.013	1:353623	1:309420	2475.364
	1318	Lng	0.006	0.013			
		Elv	0.008	0.021			
3	1218	Lat	0.000	0.055	1:0	1:0	17727.826
	1217	Lng	0.000	0.055			
		Elv	0.000	0.058			
4	1218	Lat	0.006	0.061	1:3316328	1:2487246	19897.968
	1317	Lng	0.006	0.061			
		Elv	0.008	0.064			
5	1217	Lat	0.006	0.012	1:363697	1:272772	2182.183
	1317	Lng	0.006	0.012			
		Elv	0.008	0.021			
6	1318	Lat	0.008	0.069	1:2793845	1:2031887	22350.745
	1317	Lng	0.007	0.069			
		Elv	0.011	0.071			



AZIMUTH 1319 AND 1320

AZ 1319 / 1320 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1219 1220.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position			95%	Fix
			Lat.	Long.	Elev.	Error	Status
1	1219	SH149/SH322	Lat.	32° 24' 53.53909" N	0.000	Fixed	
			Lon.	94° 42' 26.35913" W	0.000	Fixed	
			Elv.	264.157	0.000	Fixed	
2	1220	IH20	Lat.	32° 25' 54.09473" N	0.000	Fixed	
			Lon.	94° 46' 08.15537" W	0.000	Fixed	
			Elv.	277.604	0.000	Fixed	
3	1319	SH149/SH322 AZ	Lat.	32° 24' 36.20804" N	0.006		
			Lon.	94° 42' 03.05503" W	0.006		
			Elv.	292.637	0.010		
4	1320	IH20 AZ	Lat.	32° 25' 58.69985" N	0.006		
			Lon.	94° 45' 38.55576" W	0.006		
			Elv.	276.239	0.008		

AZ 1319 / 1320 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1219 1220.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

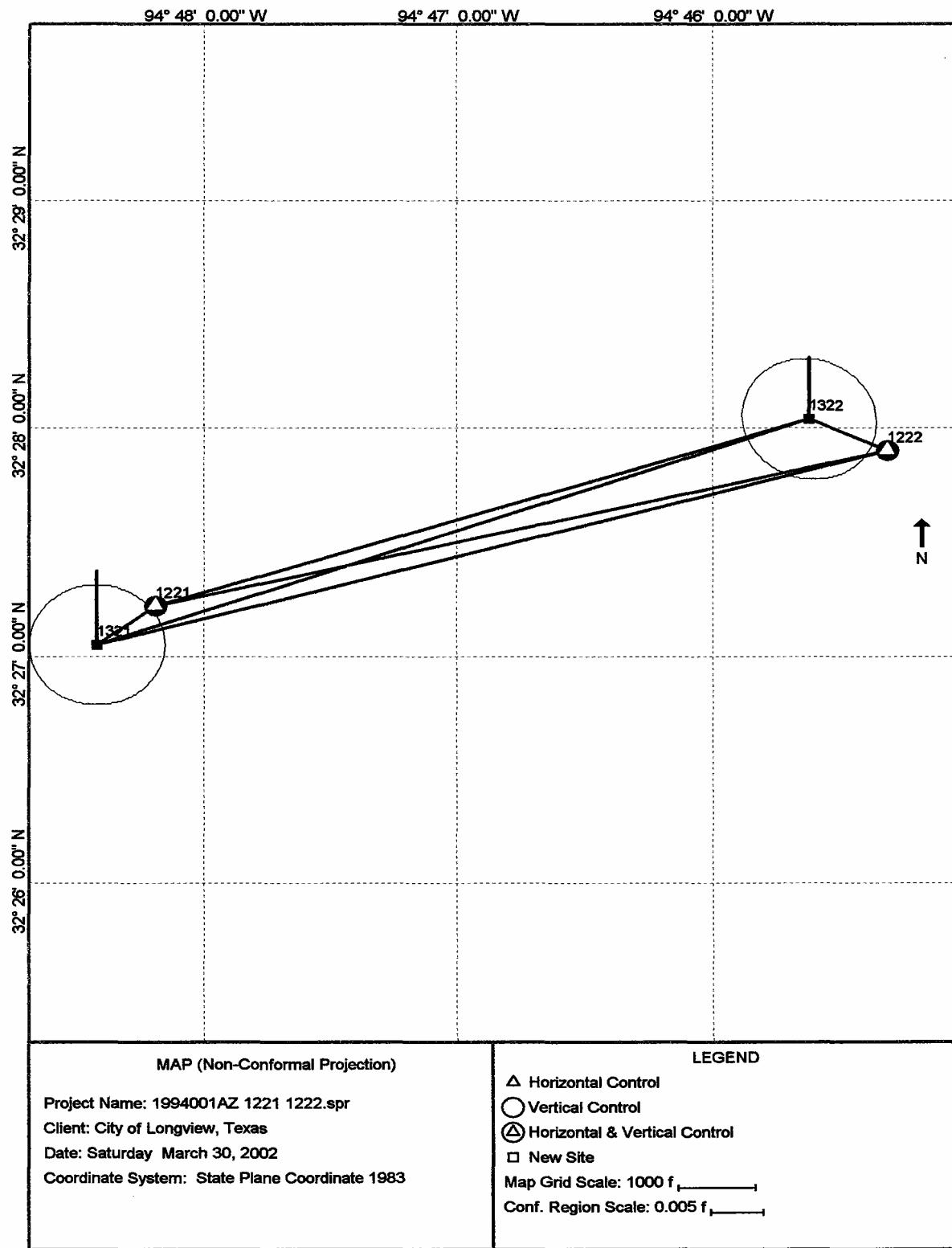
	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1219	SH149/SH322	East. 3138635.122 Nrth. 6855000.148 Elev. 264.157	0.000 0.000 0.000	Fixed Fixed Fixed
2	1220	IH20	East. 3119417.655 Nrth. 6860435.120 Elev. 277.604	0.000 0.000 0.000	Fixed Fixed Fixed
3	1319	SH149/SH322 AZ	East. 3140694.768 Nrth. 6853322.054 Elev. 292.637	0.006 0.006 0.010	
4	1320	IH20 AZ	East. 3121936.289 Nrth. 6860990.376 Elev. 276.239	0.006 0.006 0.008	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1219	SH149/SH322	2 04.110	0.999993393
2	1220	IH20	2 02.094	0.999993074
3	1319	SH149/SH322 AZ	2 04.322	0.999993486
4	1320	IH20 AZ	2 02.363	0.999993050

AZ 1319 / 1320 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1219 1220.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1220	Lat	0.006	0.069	1:3205185	1:2243629	22436.293
	1319	Lng	0.007	0.069			
		Elv	0.010	0.071			
2	1219	Lat	0.006	0.013	1:379580	1:265706	2657.064
	1319	Lng	0.007	0.013			
		Elv	0.010	0.022			
3	1219	Lat	0.000	0.062	1:0	1:0	19972.732
	1220	Lng	0.000	0.062			
		Elv	0.000	0.064			
4	1219	Lat	0.006	0.055	1:2534582	1:1971341	17742.077
	1320	Lng	0.007	0.055			
		Elv	0.009	0.058			
5	1220	Lat	0.006	0.013	1:368473	1:286590	2579.313
	1320	Lng	0.007	0.013			
		Elv	0.009	0.022			
6	1320	Lat	0.006	0.063	1:2895267	1:1558989	20266.866
	1319	Lng	0.007	0.063			
		Elv	0.013	0.065			



AZIMUTH 1321 AND 1322

AZ 1321 / 1322 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1221 1222.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position			95% Error	Fix Status
1	1221	SH 31	Lat.	32° 27'	12.85681" N	0.000	Fixed
			Lon.	94° 48'	11.30255" W	0.000	Fixed
			Elv.		264.313	0.000	Fixed
2	1222	FM1845	Lat.	32° 27'	53.60766" N	0.000	Fixed
			Lon.	94° 45'	18.69102" W	0.000	Fixed
			Elv.		266.395	0.000	Fixed
3	1321	SH31 AZ	Lat.	32° 27'	02.72924" N	0.006	
			Lon.	94° 48'	25.22510" W	0.006	
			Elv.		265.332	0.008	
4	1322	FM1845 AZ	Lat.	32° 28'	02.34618" N	0.006	
			Lon.	94° 45'	36.91377" W	0.006	
			Elv.		283.076	0.006	

AZ 1321 / 1322 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1221 1222.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

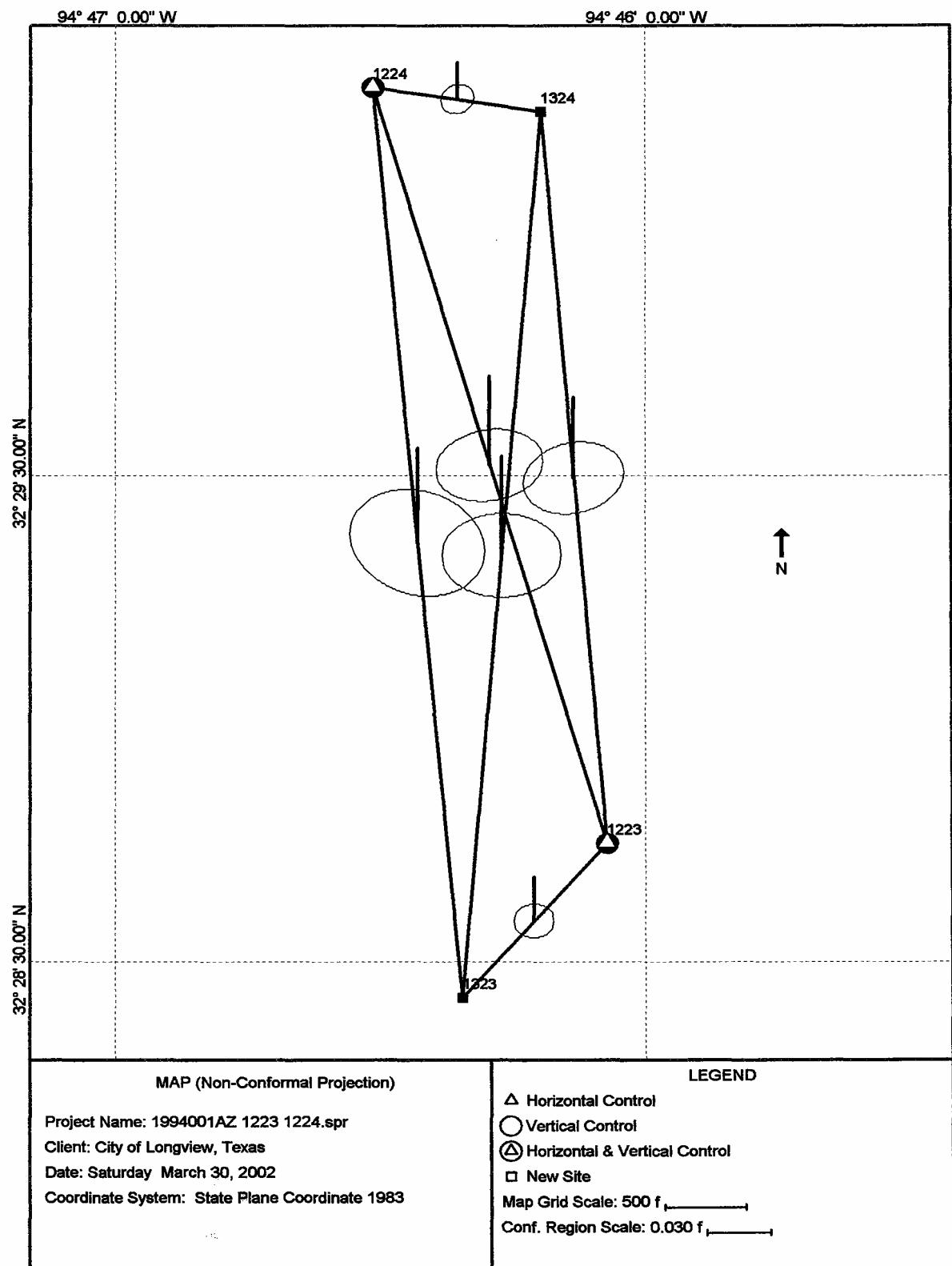
	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1221	SH 31	East. 3108590.040 Nrth. 6868016.510 Elev. 264.313	0.000 0.000 0.000	Fixed Fixed Fixed
2	1222	FM1845	East. 3123223.824 Nrth. 6872655.723 Elev. 266.395	0.000 0.000 0.000	Fixed Fixed Fixed
3	1321	SH31 AZ	East. 3107433.826 Nrth. 6866951.745 Elev. 265.332	0.006 0.006 0.008	
4	1322	FM1845 AZ	East. 3121632.209 Nrth. 6873482.639 Elev. 283.076	0.006 0.006 0.006	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1221	SH 31	2 00.975	0.99992671
2	1222	FM1845	2 02.544	0.99992469
3	1321	SH31 AZ	2 00.848	0.99992722
4	1322	FM1845 AZ	2 02.378	0.99992426

AZ 1321 / 1322 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1221 1222.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1222	Lat	0.000	0.048	1:0	1:0	15352.738
	1221	Lng	0.000	0.048			
		Elv	0.000	0.051			
2	1222	Lat	0.006	0.052	1:2798327	1:2098745	16789.971
	1321	Lng	0.006	0.052			
		Elv	0.008	0.055			
3	1221	Lat	0.006	0.011	1:261987	1:196490	1571.921
	1321	Lng	0.006	0.011			
		Elv	0.008	0.021			
4	1222	Lat	0.007	0.011	1:256261	1:256261	1793.828
	1322	Lng	0.007	0.011			
		Elv	0.007	0.021			
5	1221	Lat	0.007	0.044	1:2020349	1:2020349	14142.433
	1322	Lng	0.007	0.044			
		Elv	0.007	0.048			
6	1322	Lat	0.007	0.049	1:2232803	1:1562962	15629.624
	1321	Lng	0.006	0.049			
		Elv	0.010	0.052			



AZIMUTH 1323 AND 1324

AZ 1323 / 1324 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1223 1224.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1224	US80/MOSLEY	Lat. 32° 30' 17.66218" N Lon. 94° 46' 30.94283" W Elv. 324.057	0.000 0.000 0.000	Fixed Fixed Fixed
2	1223	SH31/FM1845	Lat. 32° 28' 44.49735" N Lon. 94° 46' 04.39269" W Elv. 328.082	0.000 0.000 0.000	Fixed Fixed Fixed
3	1324	US80/MOSLEY AZ	Lat. 32° 30' 14.60912" N Lon. 94° 46' 11.88008" W Elv. 316.114	0.006 0.006 0.006	
4	1323	SH31/FM1845 AZ	Lat. 32° 28' 25.59283" N Lon. 94° 46' 20.77273" W Elv. 291.564	0.006 0.006 0.006	

AZ 1323 / 1324 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1223 1224.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

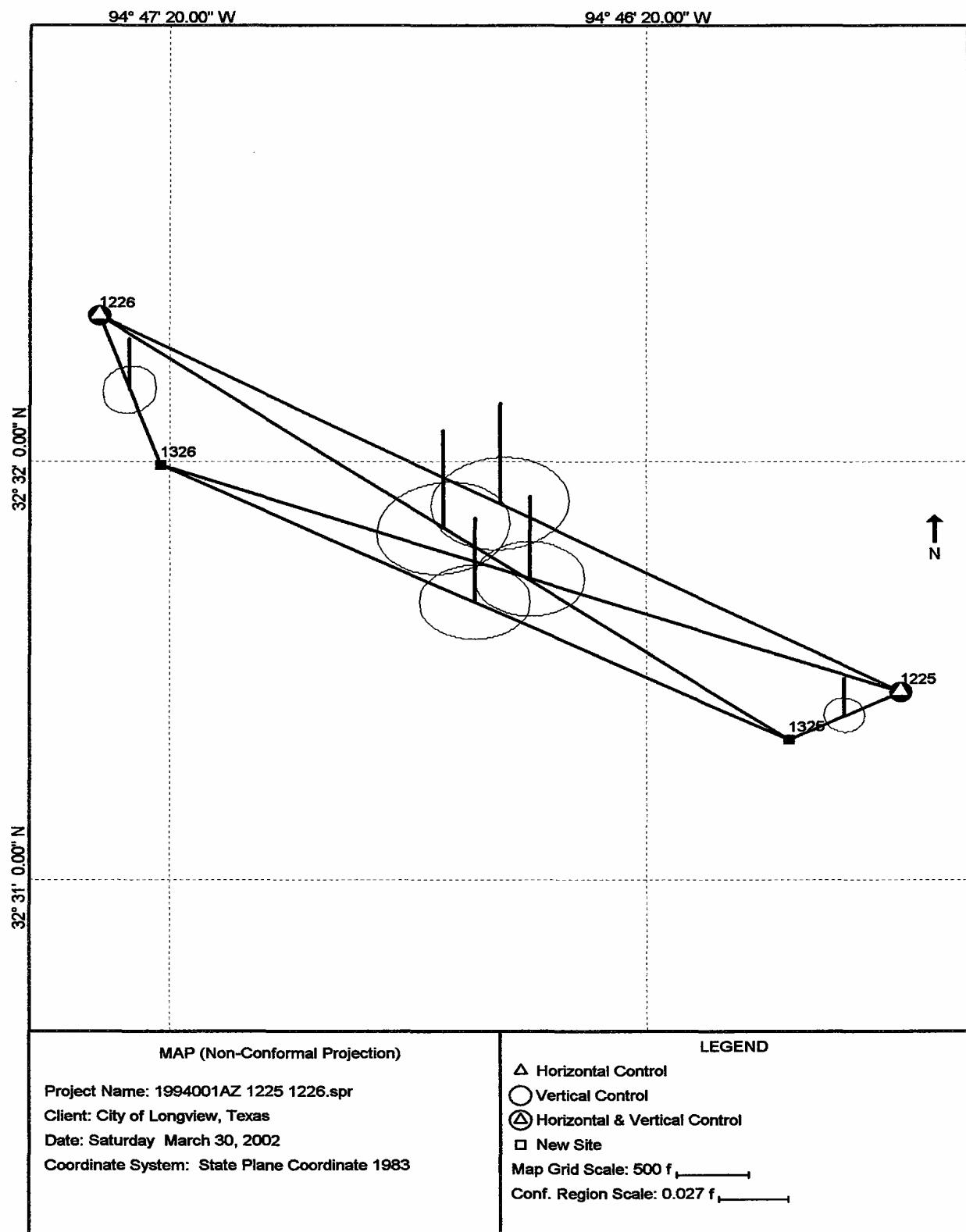
	Site ID	Site Descriptor	Position	95% Error	Fix Status
1 1224		US80/MOSLEY	East.	3116521.754	0.000 Fixed
			Nrth.	6886984.087	0.000 Fixed
			Elev.	324.057	0.000 Fixed
2 1223		SH31/FM1845	East.	3119128.298	0.000 Fixed
			Nrth.	6877655.867	0.000 Fixed
			Elev.	328.082	0.000 Fixed
3 1324		US80/MOSLEY AZ	East.	3118164.086	0.006
			Nrth.	6886733.659	0.006
			Elev.	316.114	0.006
4 1323		SH31/FM1845 AZ	East.	3117793.868	0.006
			Nrth.	6875696.856	0.006
			Elev.	291.564	0.006

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1224	US80/MOSLEY	2 01.887	0.99991783
2	1223	SH31/FM1845	2 02.128	0.99992221
3	1324	US80/MOSLEY AZ	2 02.060	0.99991797
4	1323	SH31/FM1845 AZ	2 01.980	0.99992312

AZ 1323 / 1324 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1223 1224.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1224	Lat	0.000	0.031	1:0	1:0	9686.394
		Lng	0.000	0.031			
		Elv	0.000	0.036			
2	1224	Lat	0.007	0.011	1:237354	1:237354	1661.482
		Lng	0.006	0.011			
		Elv	0.007	0.021			
3	1223	Lat	0.007	0.030	1:1304237	1:1304237	9129.662
		Lng	0.006	0.030			
		Elv	0.007	0.034			
4	1224	Lat	0.007	0.036	1:1622817	1:1622817	11359.719
		Lng	0.006	0.036			
		Elv	0.007	0.040			
5	1223	Lat	0.007	0.012	1:338686	1:338686	2370.803
		Lng	0.006	0.012			
		Elv	0.007	0.021			
6	1324	Lat	0.007	0.035	1:1577712	1:1577712	11043.989
		Lng	0.006	0.035			
		Elv	0.007	0.039			



AZIMUTH 1325 AND 1326

AZ 1325 / 1326 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1225 1226.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1226	SH300/BLUE RIDGE	Lat. 32° 32' 20.91928" N Lon. 94° 47' 28.85916" W Elv. 412.821	0.000 0.000 0.000	Fixed Fixed Fixed
2	1225	BILL OWENS	Lat. 32° 31' 26.81491" N Lon. 94° 45' 48.32713" W Elv. 326.050	0.000 0.000 0.000	Fixed Fixed Fixed
3	1326	SH300/BLUE RIDGE AZ	Lat. 32° 31' 59.41615" N Lon. 94° 47' 21.15633" W Elv. 405.601	0.006 0.006 0.008	
4	1325	BILL OWENS AZ	Lat. 32° 31' 19.89074" N Lon. 94° 46' 02.19043" W Elv. 341.464	0.006 0.006 0.006	

AZ 1325 / 1326 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1225 1226.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

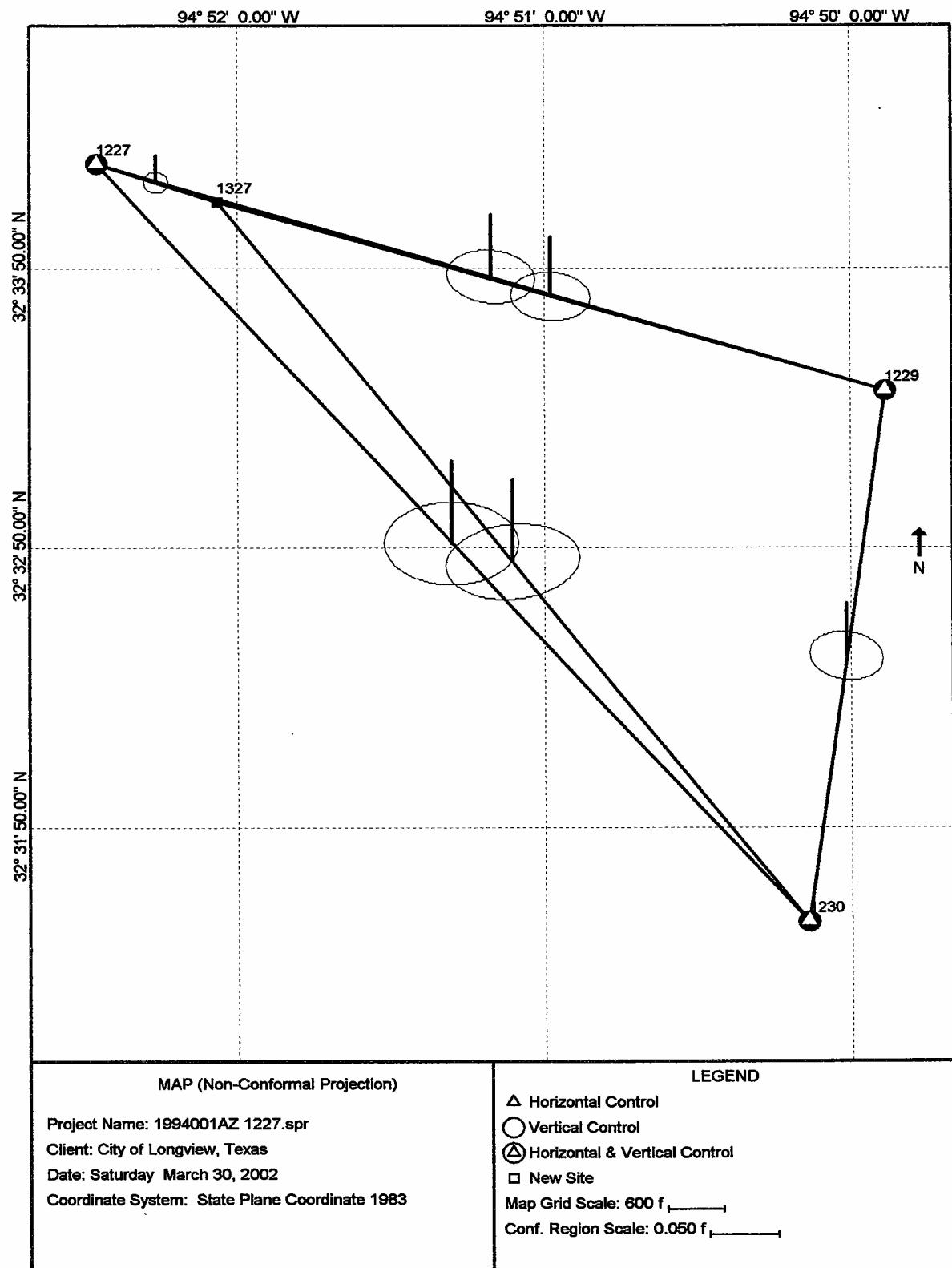
	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1226	SH300/BLUE RIDGE	East. 3111125.660 Nrth. 6899256.725 Elev. 412.821	0.000 0.000 0.000	Fixed Fixed Fixed
2	1225	BILL OWENS	East. 3119920.270 Nrth. 6894097.508 Elev. 326.050	0.000 0.000 0.000	Fixed Fixed Fixed
3	1326	SH300/BLUE RIDGE AZ	East. 3111861.355 Nrth. 6897108.347 Elev. 405.601	0.006 0.006 0.008	
4	1325	BILL OWENS AZ	East. 3118758.973 Nrth. 6893356.038 Elev. 341.464	0.006 0.006 0.006	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1226	SH300/BLUE RIDGE	2 01.361	0.99991235
2	1225	BILL OWENS	2 02.274	0.99991472
3	1326	SH300/BLUE RIDGE AZ	2 01.431	0.99991328
4	1325	BILL OWENS AZ	2 02.148	0.99991502

AZ 1325 / 1326 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1225 1226.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair		Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1226	Lat	0.000	0.033	1:0	1:0	10197.581
		Lng	0.000	0.033			
		Elv	0.000	0.037			
2	1226	Lat	0.006	0.012	1:378515	1:283886	2271.094
		Lng	0.006	0.012			
		Elv	0.008	0.021			
3	1225	Lat	0.006	0.028	1:1434031	1:1075523	8604.187
		Lng	0.006	0.028			
		Elv	0.008	0.033			
4	1226	Lat	0.007	0.031	1:1378471	1:1378471	9649.300
		Lng	0.006	0.031			
		Elv	0.007	0.036			
5	1225	Lat	0.007	0.011	1:196862	1:196862	1378.038
		Lng	0.006	0.011			
		Elv	0.007	0.021			
6	1326	Lat	0.006	0.026	1:1308871	1:872580	7853.224
		Lng	0.006	0.026			
		Elv	0.009	0.031			



AZIMUTH 1327

AZ 1327 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1227.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1227	WHITE OAK RD	Lat. 32° 34' 12.46089" N Lon. 94° 52' 27.98452" W Elv. 446.428	0.000 0.000 0.000	Fixed Fixed Fixed
2	1229	FM2275/FM1845	Lat. 32° 33' 23.75759" N Lon. 94° 49' 53.20630" W Elv. 400.177	0.000 0.000 0.000	Fixed Fixed Fixed
3	1230	WHATLEY	Lat. 32° 31' 29.65821" N Lon. 94° 50' 08.41282" W Elv. 351.908	0.000 0.000 0.000	Fixed Fixed Fixed
4	1327	WHITE OAK RD AZ	Lat. 32° 34' 04.06595" N Lon. 94° 52' 03.96699" W Elv. 418.075	0.018 0.021 0.042	

AZ 1327 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date: 03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1227.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

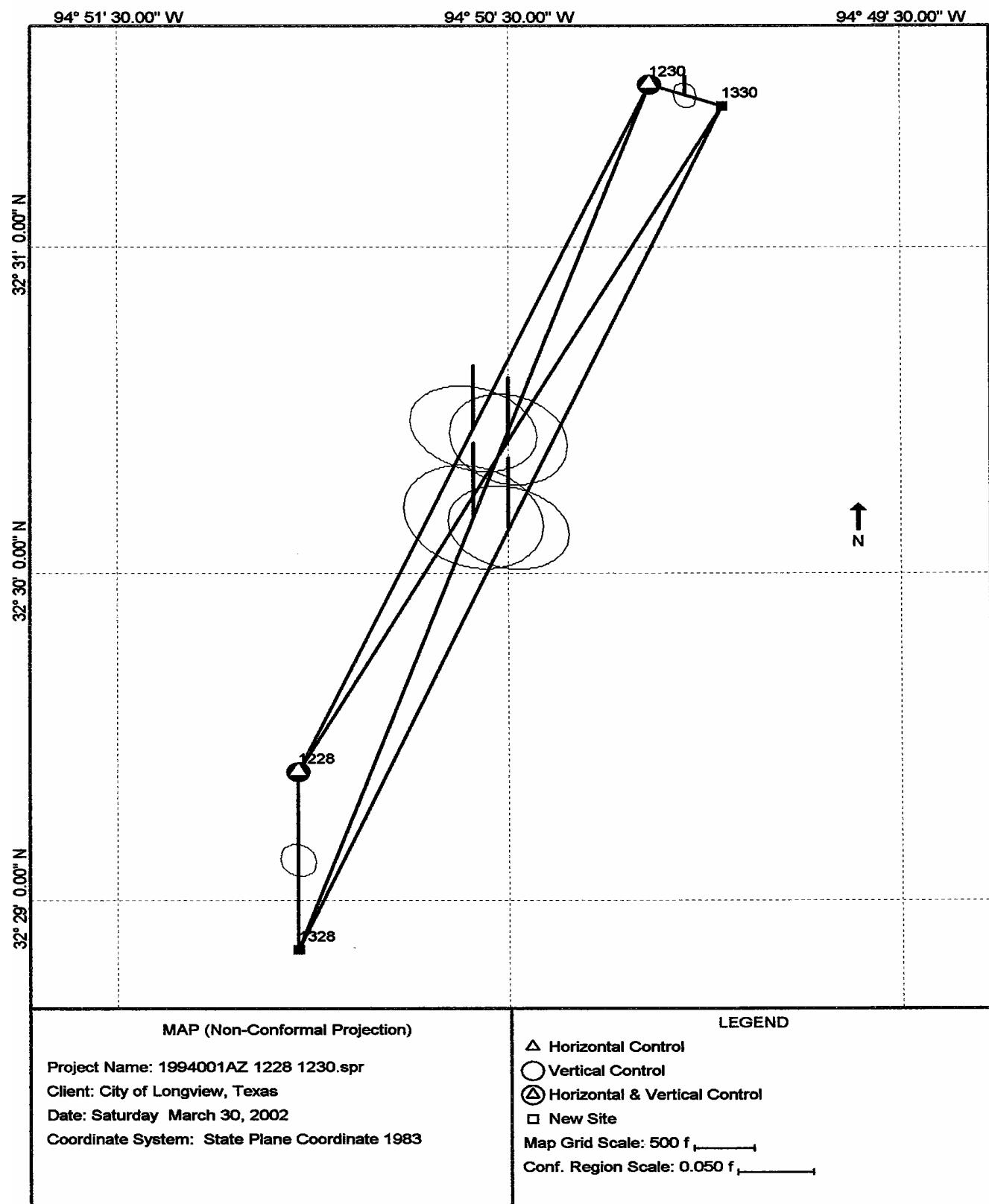
	Site ID	Site Descriptor	Position	95% Error	Fix Status
1	1227	WHITE OAK RD	East. 3085147.076 Nrth. 6909628.306 Elev. 446.428	0.000 0.000 0.000	Fixed Fixed Fixed
2	1229	FM2275/FM1845	East. 3098555.396 Nrth. 6905169.266 Elev. 400.177	0.000 0.000 0.000	Fixed Fixed Fixed
3	1230	WHATLEY	East. 3097656.863 Nrth. 6893600.480 Elev. 351.908	0.000 0.000 0.000	Fixed Fixed Fixed
4	1327	WHITE OAK RD AZ	East. 3087230.370 Nrth. 6908851.436 Elev. 418.075	0.021 0.018 0.042	

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1227	WHITE OAK RD	1 58.642	0.99990770
2	1229	FM2275/FM1845	2 00.049	0.99990970
3	1230	WHATLEY	1 59.910	0.99991459
4	1327	WHITE OAK RD AZ	1 58.860	0.99990804

AZ 1327 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:
 03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm Project file:
 1994001AZ 1227.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

Site	Pair	Pair QA	Site	Relative	Allow.	Horizontal	Vertical	Distance
				Error	Error	Relative Acc	Relative Acc	
1	1230	Lat	0.018	0.057		1:879826	1:439913	18476.333
		Lng	0.021	0.057				
		Elv	0.042	0.060				
2	1230	Lat	0.000	0.037		1:0	1:0	11604.854
		Lng	0.000	0.037				
		Elv	0.000	0.041				
3	1229	Lat	0.018	0.038		1:567133	1:283566	11909.819
		Lng	0.021	0.038				
		Elv	0.042	0.042				
4	1230	Lat	0.000	0.063		1:0	1:0	20334.131
		Lng	0.000	0.063				
		Elv	0.000	0.065				
5	1229	Lat	0.000	0.044		1:0	1:0	14131.852
		Lng	0.000	0.044				
		Elv	0.000	0.048				
6	1227	Lat	0.018	0.012		1:105897	1:52948	2223.842
		Lng	0.021	0.012				
		Elv	0.042	0.021				



AZIMUTH 1328 AND 1330

AZ 1328 / 1330 CONTROL GEODETIC POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
Height System: Ortho. Ht. (GEOID99)
Project file: 1994001AZ 1228 1230.spr
Desired Horizontal Accuracy: 0.033USft + 10ppm
Desired Vertical Accuracy: 0.066USft + 10ppm
Confidence Level: 95% Err.
Linear Units of Measure: US Feet

Site				95%	Fix
	ID	Site Descriptor	Position	Error	Status
1	1228	LONGVIEW CC	Lat. 32° 29' 23.56919" N	0.000	Fixed
			Lon. 94° 51' 02.24264" W	0.000	Fixed
			Elv. 319.363	0.000	Fixed
2	1230	WHATLEY	Lat. 32° 31' 29.65821" N	0.000	Fixed
			Lon. 94° 50' 08.41282" W	0.000	Fixed
			Elv. 351.908	0.000	Fixed
3	1328	LONGVIEW CC AZ	Lat. 32° 28' 51.14821" N	0.006	
			Lon. 94° 51' 02.46463" W	0.006	
			Elv. 303.478	0.006	
4	1330	WHATLEY AZ	Lat. 32° 31' 25.54020" N	0.006	
			Lon. 94° 49' 57.53885" W	0.006	
			Elv. 355.930	0.006	

AZ 1328 / 1330 CONTROL GRID POSITIONS

Horizontal Coordinate System: State Plane Coordinate 1983 Date:03/30/02
 Height System: Ortho. Ht. (GEOID99)
 Project file: 1994001AZ 1228 1230.spr
 Desired Horizontal Accuracy: 0.033USft + 10ppm
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site ID	Site Descriptor	Position	95% Error	Fix Status
1 1228		LONGVIEW CC	East.	3093493.608	0.000 Fixed
			Nrth.	6880705.769	0.000 Fixed
			Elev.	319.363	0.000 Fixed
2 1230		WHATLEY	East.	3097656.863	0.000 Fixed
			Nrth.	6893600.480	0.000 Fixed
			Elev.	351.908	0.000 Fixed
3 1328		LONGVIEW CC AZ	East.	3093588.396	0.006
			Nrth.	6877430.762	0.006
			Elev.	303.478	0.006
4 1330		WHATLEY AZ	East.	3098601.786	0.006
			Nrth.	6893217.064	0.006
			Elev.	355.930	0.006

	Site ID	Site Descriptor	Convergence	Scale Factor
1	1228	LONGVIEW CC	1 59.421	0.99992035
2	1230	WHATLEY	1 59.910	0.99991459
3	1328	LONGVIEW CC AZ	1 59.419	0.99992189
4	1330	WHATLEY AZ	2 00.009	0.99991477

AZ 1328 / 1330 NETWORK RELATIVE ACCURACY

Desired Horizontal Accuracy: 0.033USft + 10ppm Date:03/30/02
 Desired Vertical Accuracy: 0.066USft + 10ppm
 Project file: 1994001AZ 1228 1230.spr
 Confidence Level: 95% Err.
 Linear Units of Measure: US Feet

	Site Pair	Relative Error	Allow. Error	Horizontal Relative Acc	Vertical Relative Acc	Distance
1	1228	Lat 0.000	0.043	1:0	1:0	13551.373
	1230	Lng 0.000	0.043			
		Elv 0.000	0.046			
2	1228	Lat 0.007	0.014	1:468098	1:468098	3276.690
	1328	Lng 0.007	0.014			
		Elv 0.007	0.022			
3	1328	Lat 0.007	0.052	1:2382173	1:2382173	16675.220
	1230	Lng 0.007	0.052			
		Elv 0.007	0.055			
4	1228	Lat 0.007	0.042	1:1930737	1:1930737	13515.159
	1330	Lng 0.007	0.042			
		Elv 0.007	0.046			
5	1330	Lat 0.007	0.051	1:2366396	1:2366396	16564.780
	1328	Lng 0.007	0.051			
		Elv 0.007	0.054			
6	1330	Lat 0.007	0.011	1:145692	1:145692	1019.850
	1230	Lng 0.007	0.011			
		Elv 0.007	0.020			



PSM 0101
FAA 07F A 1994, GLADEWATER AIRPORT



PSM 0102
(CHARLIE BROWN) SH 300 & FM 3358



PSM 0103
4F4 A 1994, GILMER AIRPORT



PSM 0104 (GLOX)
AMERICAN MAID CLEANING COMPANY (FORMERLY GLO)



PSM 0105 (GGG A)
FAA GGG A @ GREGG COUNTY AIRPORT



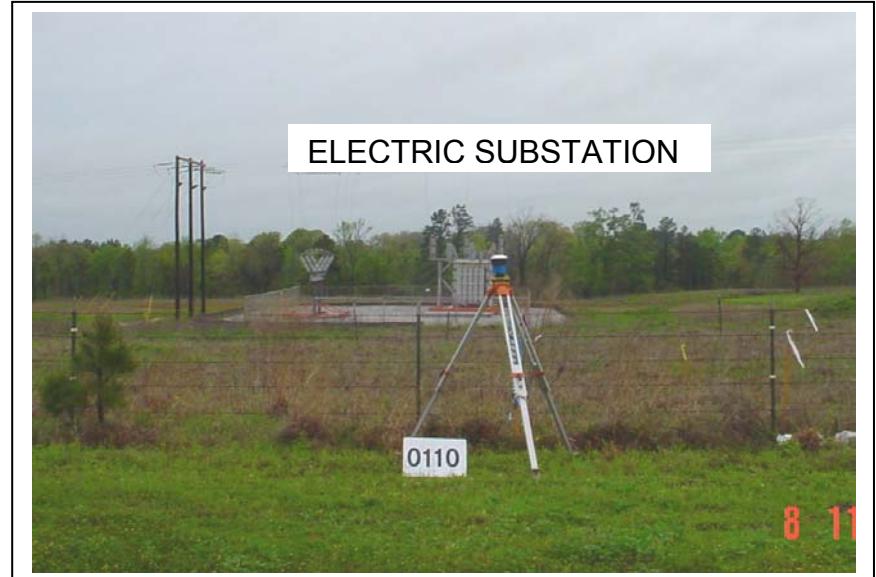
0105 (GGG A)



PSM 0108 (HARLETON)



PSM 0109 (TATUM)



PSM 110 (DARCO)



PSM 0111 (NESBITT)



PSM 0112 (FAA ASL A 1994)
MARSHALL AIRPORT



PSM 0113 (KILGORE)



PSM 0114 (CRIM)



PSM 0115 (DARBY 1)
ON PRIVATE PROPERTY, SEE BAR-K LAND COMPANY



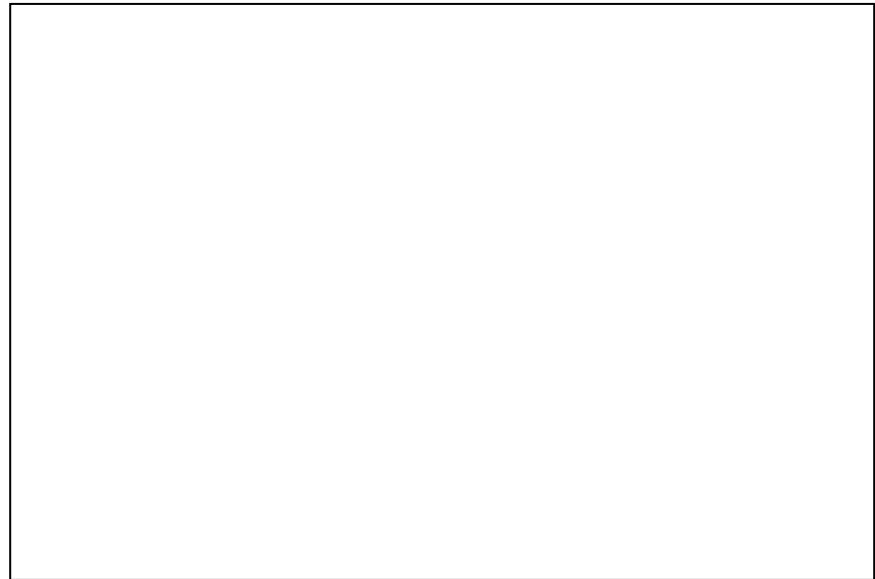
PSM 0116 (SH 43 / TUMCO)
TUMCO RR BRIDGE IN BACKGROUND



PSM 0117 (FAA F12 A 1994)
HENDERSON AIRPORT



PSM 0304
INDUSTRIAL STEEL, 4750 WEST MARSHALL AVENUE





CSM 1200
AT CITY HALL



CSM 1300



CSM 1201



CSM 1301



CSM 1202



CSM 1302



CSM 1203



CSM 1303



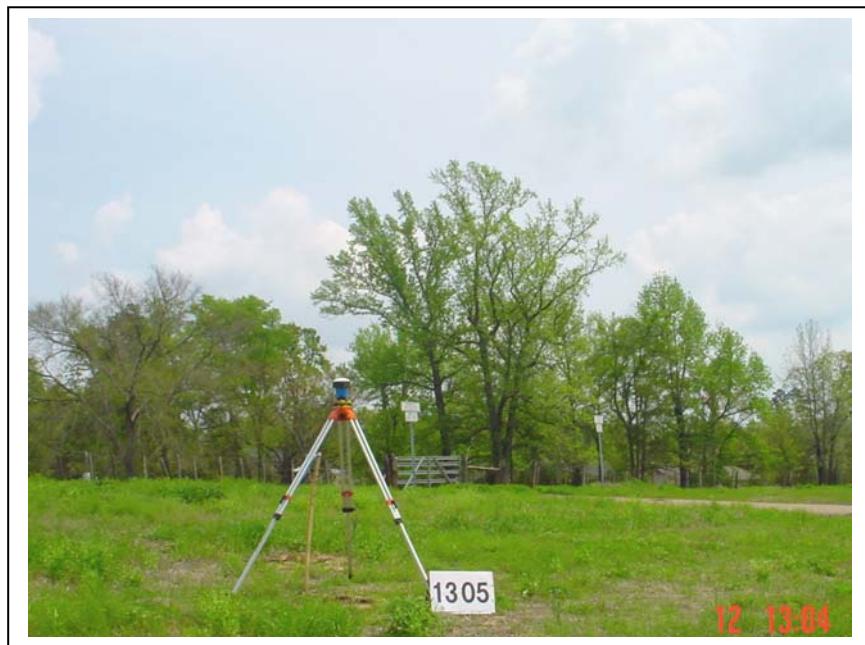
CSM 1204



CSM 1304



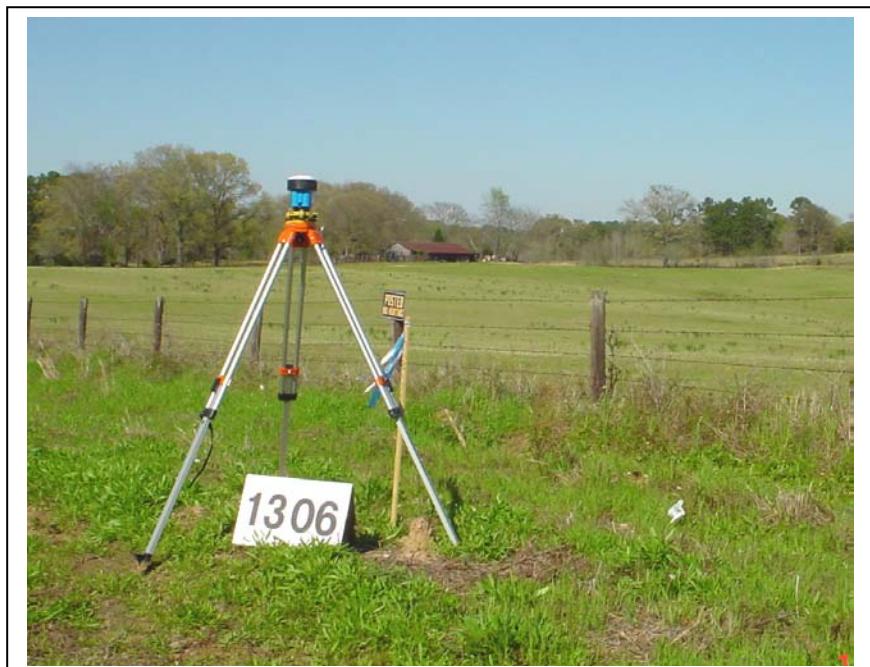
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CSM 1305



CSM 1206



CSM 1306



CSM 1207



CSM 1307



CSM 1208



CSM 1308



CSM 1209



CSM 1309



CSM 1210



CSM 1310



CSM 1211



CSM 1311



CSM 1212



CSM 1312



CSM 1213



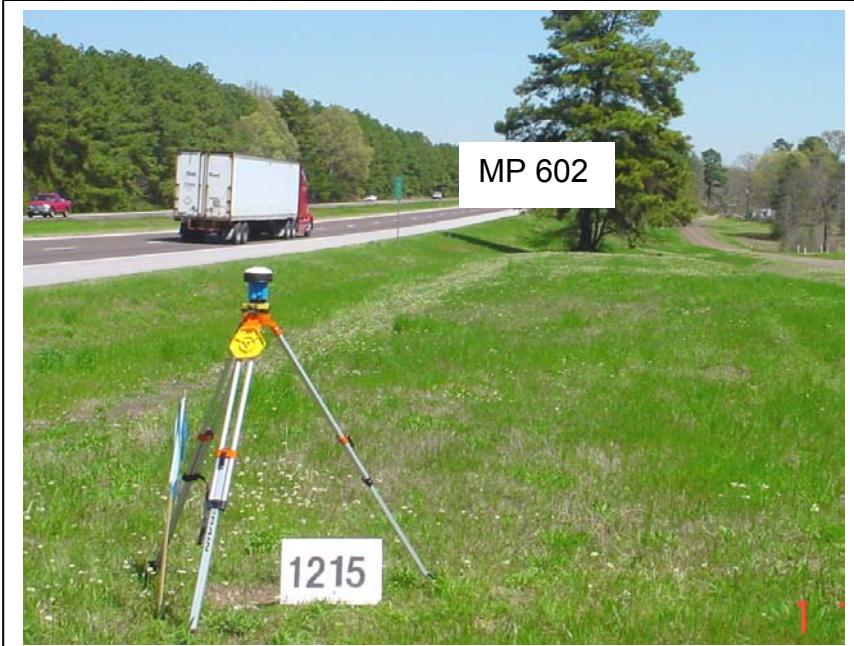
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CSM 1214



CSM 1314



CSM 1215



CSM 1315



CSM 1216



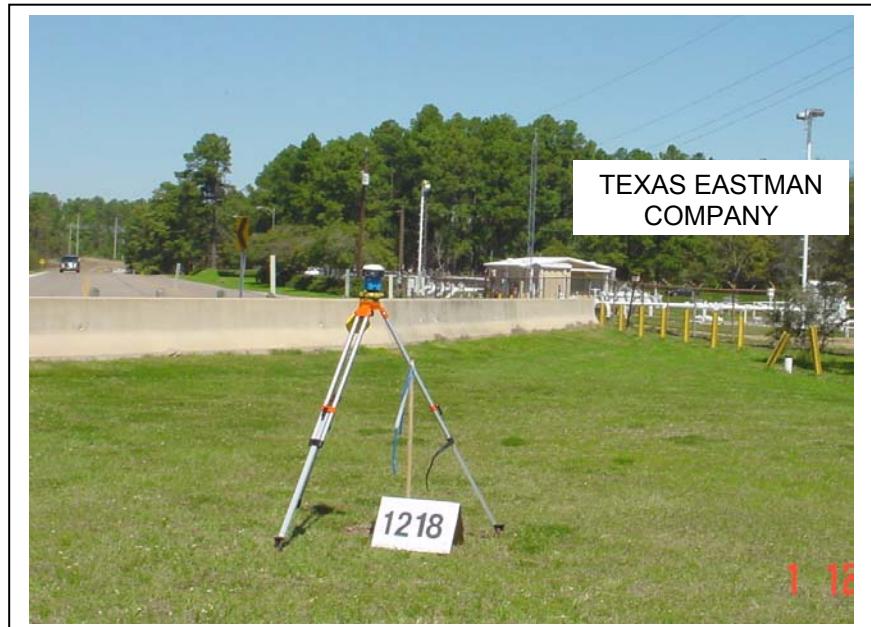
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CSM 1217



CSM 1317



CSM 1218



CSM 1318



CSM 1219



CSM 1319



CSM 1220



CSM 1320



CSM 1221



CSM 1321



CSM 1222



CSM 1322



CSM 1223



CSM 1323



CSM 1224



CSM 1324



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CSM 1326



CSM 1227



CSM 1327



CSM 1228



CSM 1328



CSM 1229



CSM 1329



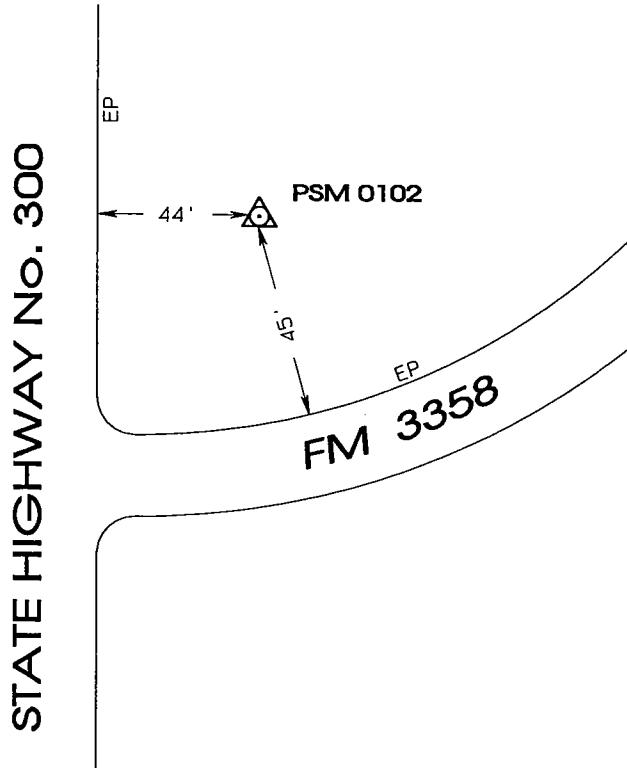
CSM 1230



CSM 1330

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located at the intersection of State Highway 300 and FM 3358, north of Longview and north of FM 1844, on the north east corner of the intersection.

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0102".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

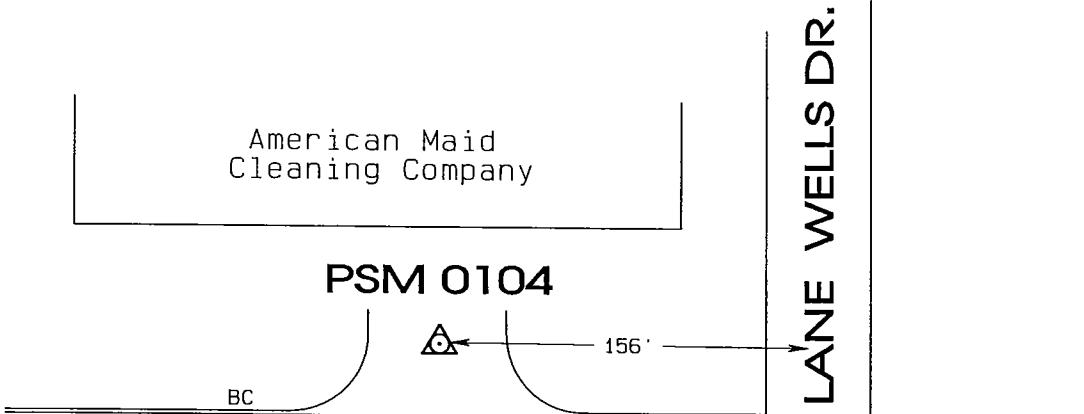
East.	3,094,754.808
North.	6,927,366.026
Elv.	412.95
Convergence	1° 59.727'
Scale Factor	0.99990108

GEODETIC POSITION:

Lat.	32° 37' 04.58408" N
Lon.	94° 50' 28.55638" W

PSM 0102
JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



WEST MARSHALL AVE, (US 80)

GENERAL LOCATION:

In front of American Maid Cleaning Company (formerly GLO Company) at 4105 West Marshall Avenue.

Mark is an "X" chiseled in a concrete driveway.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,108,746.553
North.	6,887,666.167
Elev.	384.04
Convergence	2° 01.065'
Scale Factor	0.99991740

GEODETIC POSITION:

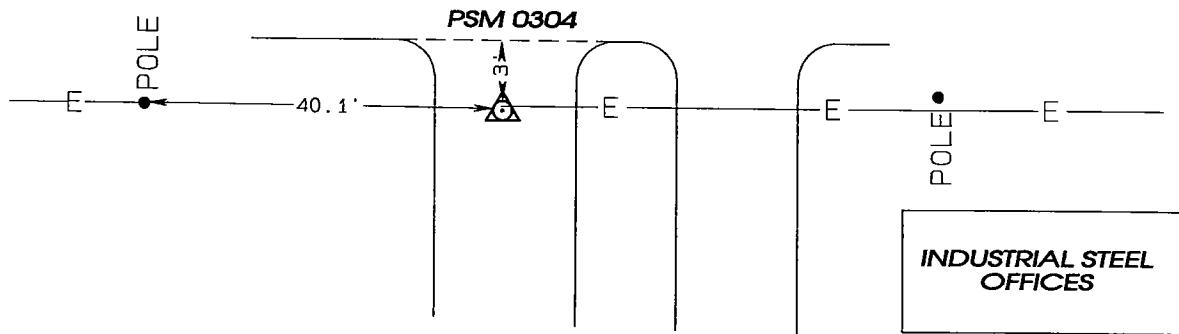
Lat.	32° 30'	27.12568	N
Lon.	94° 48'	01.40252	W

PSM 0104 (GLOX)
JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



US HIGHWAY 80



GENERAL LOCATION:

Marker is located on US Highway 80 west of Loop 281 West, and east of Silverfalls Road. An X cut in the concrete drive way of Industrial Steel, across the street from house #4721

Mark is an "X" chiseled in a concret driveway.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 106, 400.865
North.	6, 887, 894.657
Elev.	402.07
Convergence	2° 00.817'
Scale Factor	0.99991726

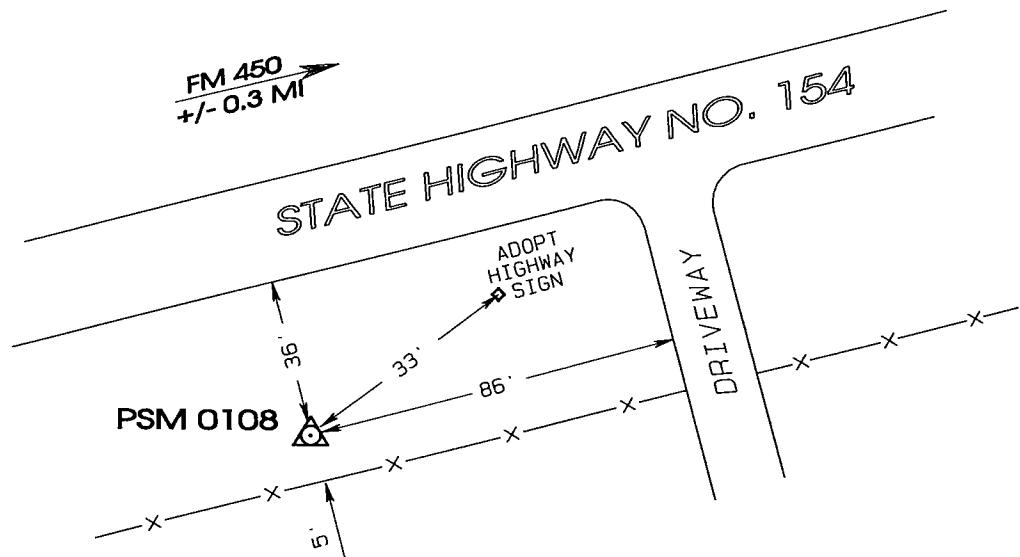
GEODETIC POSITION:

Lat.	32° 30' 30.20175"	N
Lon.	94° 48' 28.68489"	W

PSM 0304 (AZM FOR GLOX)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located on the south side of State Highway No. 154 approximately 0.3 mile southwest of the intersection of SH 154 and FM 450

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0108".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 173, 100.810
North.	6, 952, 320.035
Elev.	349.954
Convergence	2° 08.147'
Scale Factor	0.99989367

GEODETIC POSITION:

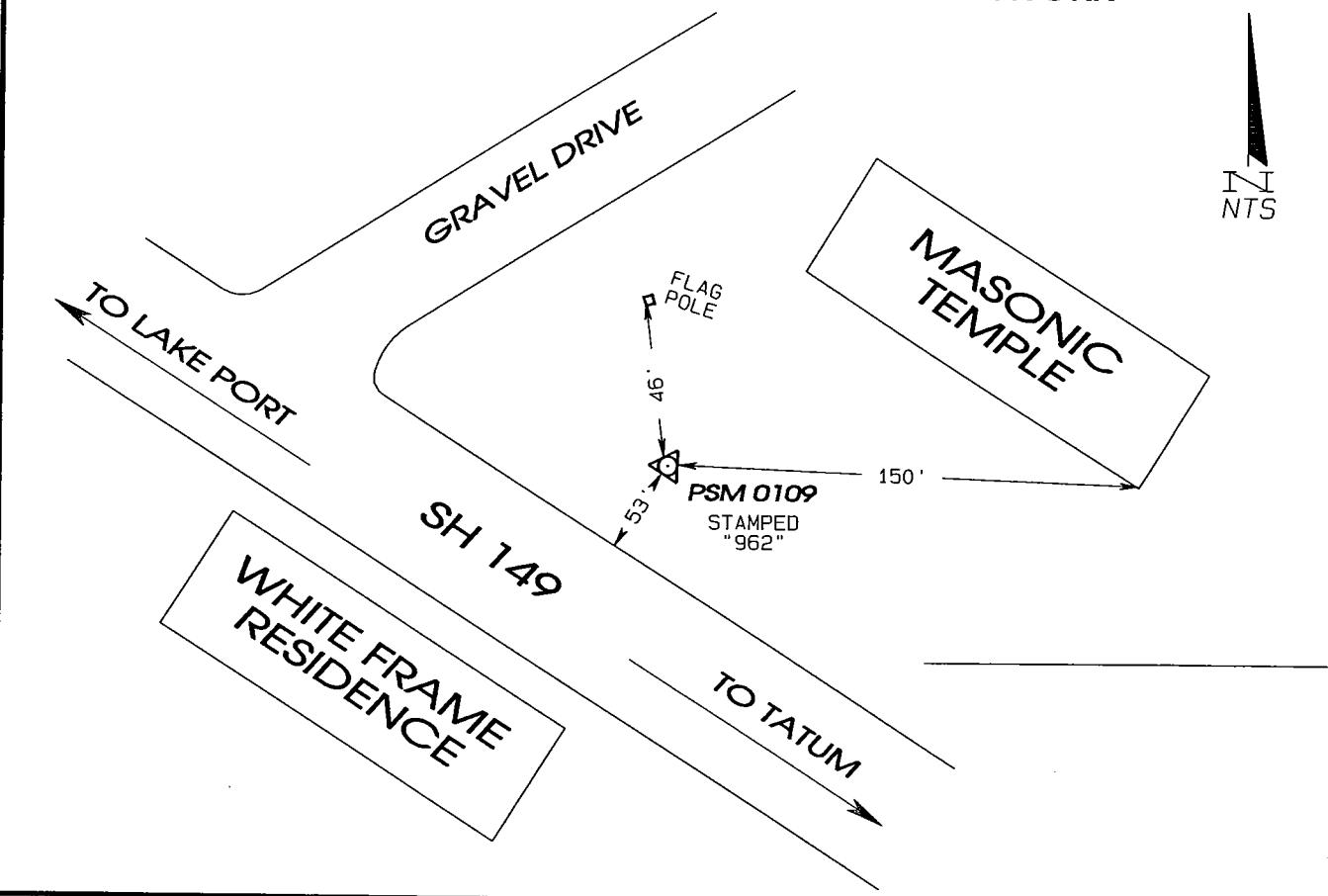
Lat.	32° 40' 43.41252" N
Lon.	94° 35' 02.25408" W

PSM 0108 (HARLETON)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located 10.9 miles south of Lake Port on SH 149 and 2.4 miles northwest of Tatum, on the north side of the road in front of the Masonic Lodge.

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0109".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 191, 770.257
North.	6, 825, 301.010
Elev.	353.421
Convergence	2° 09.622'
Scale Factor	0.99995180

GEODETIC POSITION:

Lat.	32° 19' 40.45161" N
Lon.	94° 32' 19.99111" W

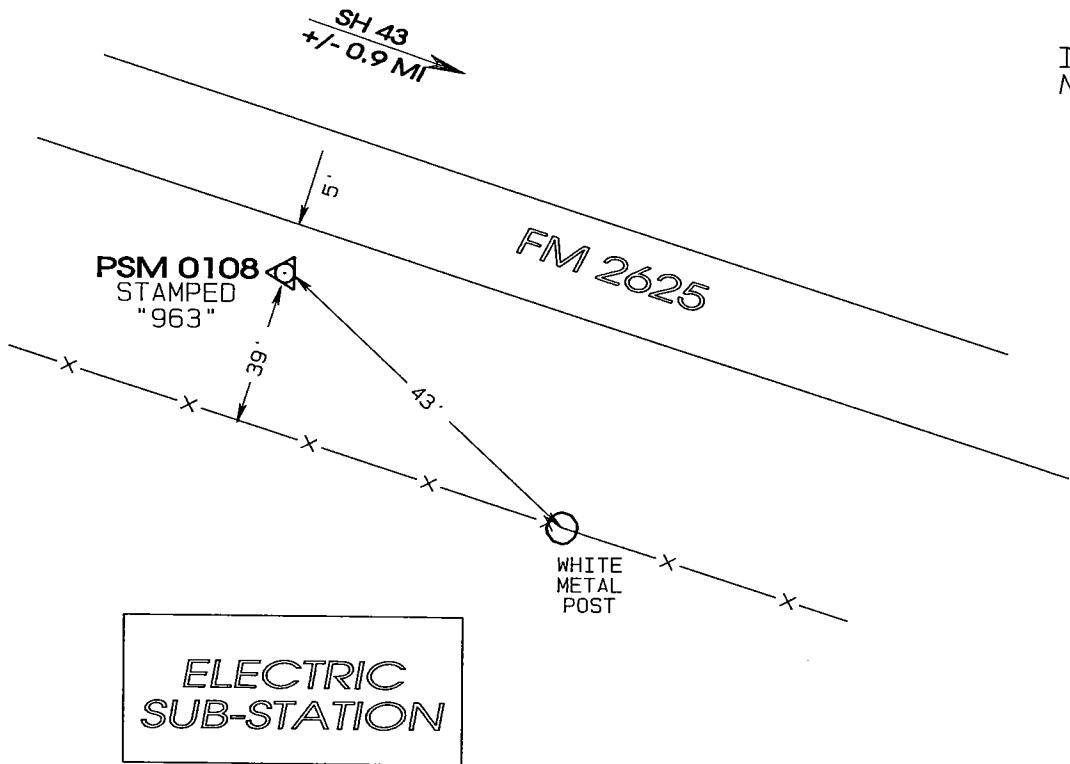
PSM 0109 (TATUM)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

NTS



GENERAL LOCATION:

Marker on FM 2625 west of SH 43 approximately 1 mile, and east of FM 3251 approximately .75 mile, on the south side of the road.

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "963".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 217, 241.761
North.	6, 863, 272.724
Elev.	360.83
Convergence	2° 12.474'
Scale Factor	0.99993114

GEODETIC POSITION:

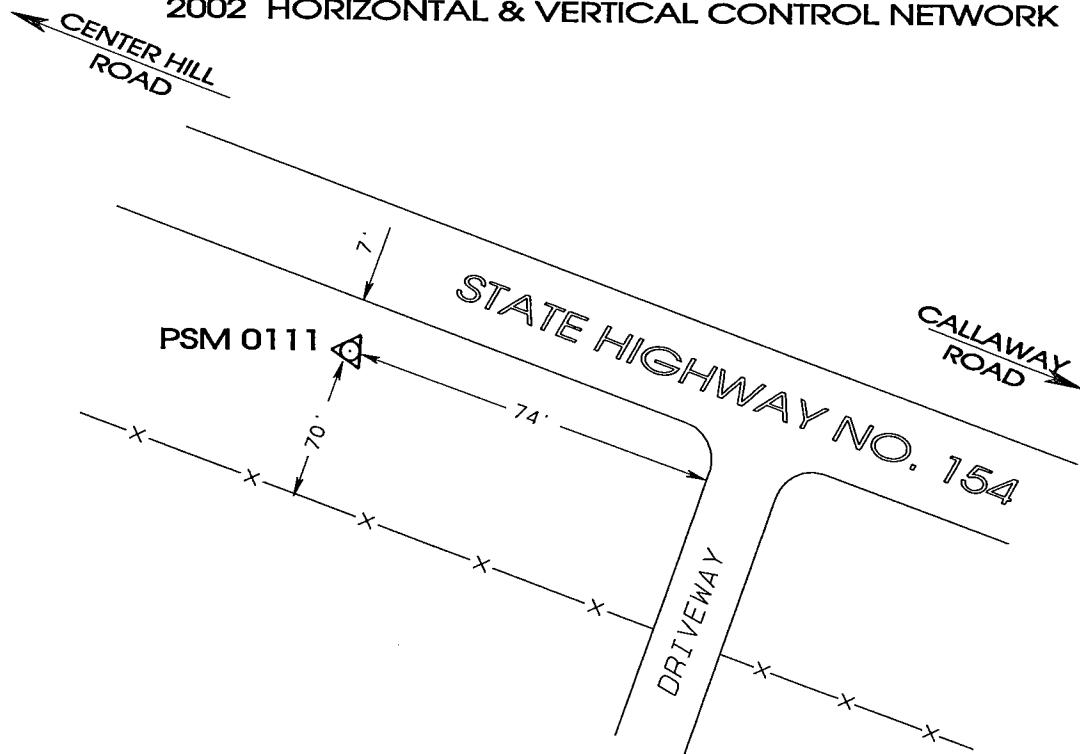
Lat.	32° 25' 46.32191" N
Lon.	94° 27' 06.30411" W

PSM 0110 (DARCO)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



**RED
SIMPSON,
INC.**

GENERAL LOCATION:

Marker is located on the south side of State Highway No. 154 approximately 74' from the front entrance of Red Simpson Inc.

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0111".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,216,775.281
North.	6,921,853.608
Elev.	331.45
Convergence	2° 12.66'
Scale Factor	0.99990480

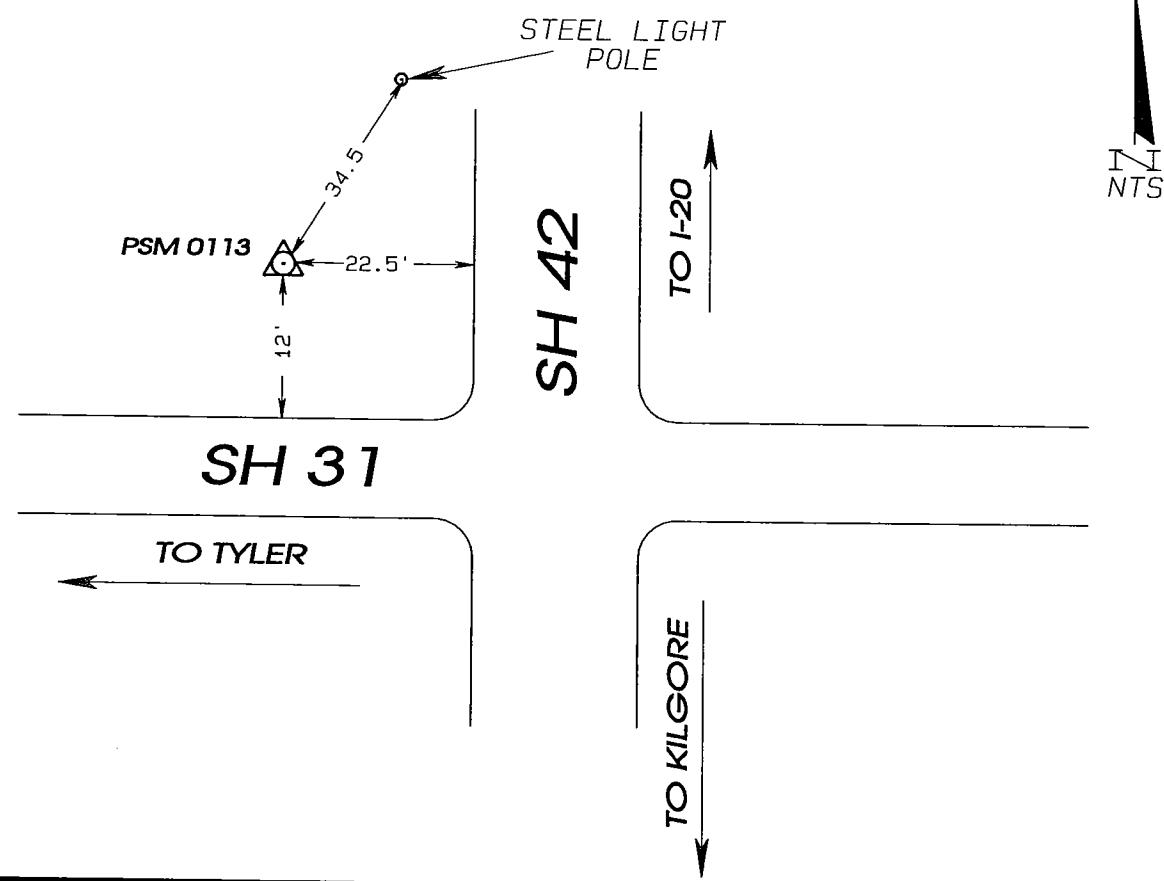
GEODETIC POSITION:

Lat.	32° 35' 25.75804" N
Lon.	94° 26' 45.37249" W

PSM 0111 (NESBITT)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located at the intersection of State Highway 42 and State Highway 31, on the northwest corner.

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0113".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet,

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,088,847.169
North.	6,848,729.651
Elev.	355.16
Convergence	1° 58.811'
Scale Factor	0.99993634

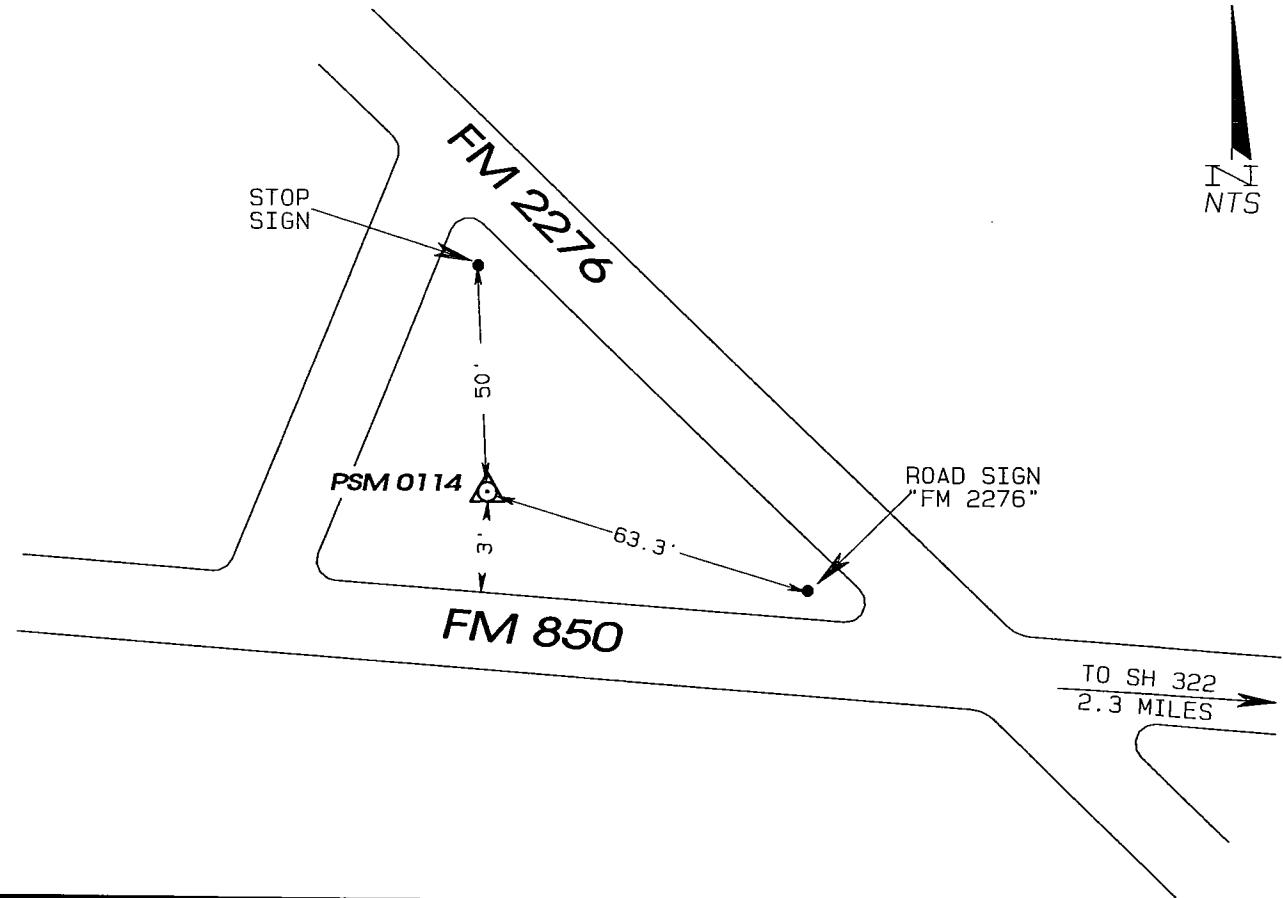
GEODETIC POSITION:

Lat.	32° 24' 08.93138" N
Lon.	94° 52' 09.36126" W

PSM 0113 (KILGORE)
JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located at the intersection of FM 850 and FM 2276

Marker is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0114".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3, 108, 049.314
North. 6, 803, 652.317

Elev. 388.43

Convergence 2° 00.678'

Scale Factor 0.99996335

GEODETIC POSITION:

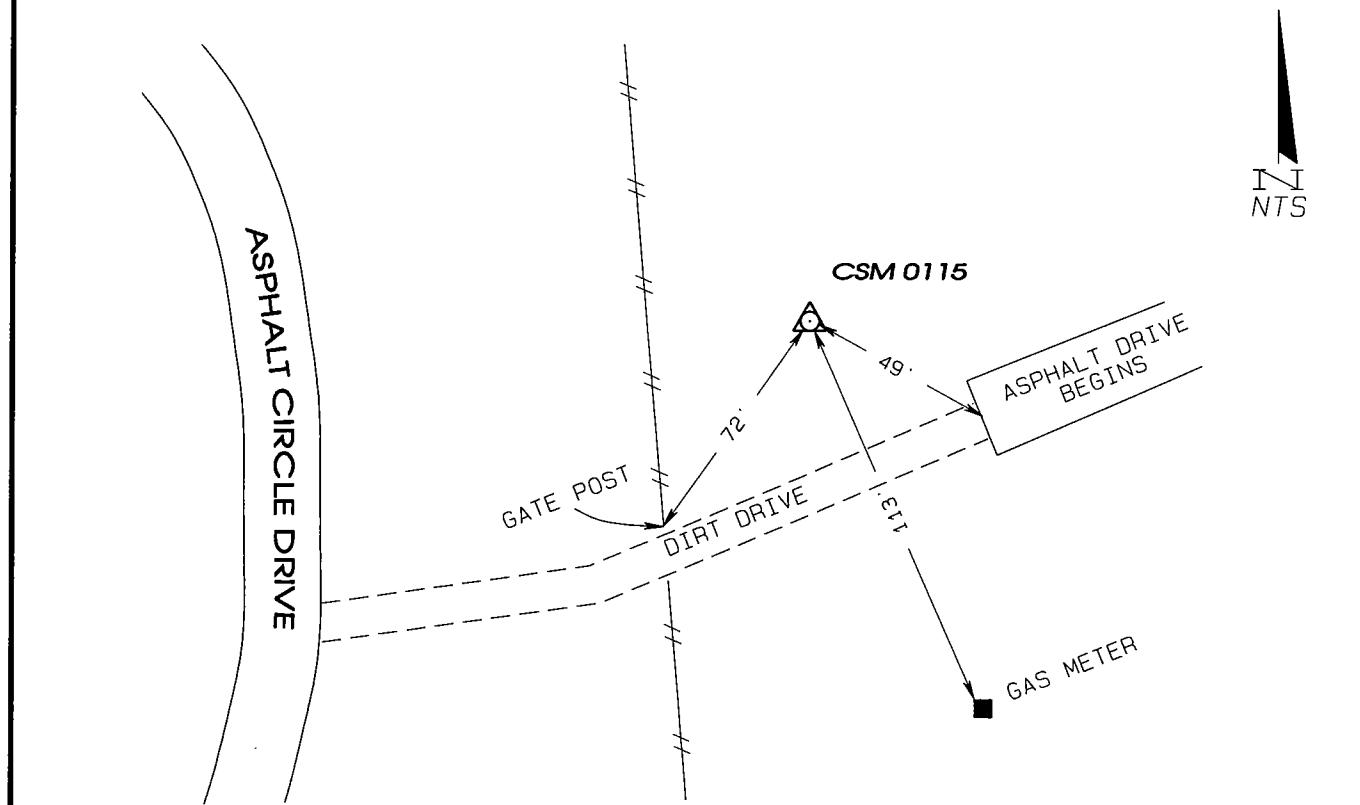
Lat. 32° 16' 36.52259" N
Lon. 94° 48' 43.97371" W

PSM 0114 (CRIM)

JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located in the Bar Chase Development off of Bar-K-Ranch Road. At the intersection of Bar Chase Trail and Water Chase Court take the private drive on the north side of the road, go through gate bearing to the right to a gate in a wood fence, see map.

**LOCATED ON PRIVATE PROPERTY: CONTACT BAR-K LAND COMPANY
3583 SAM PAGE ROAD - 903-663-6363**

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0115".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 131, 620.842
North.	6, 921, 537.634
Elev.	354.70
Convergence	2° 03.621'
Scale Factor	0.99990371

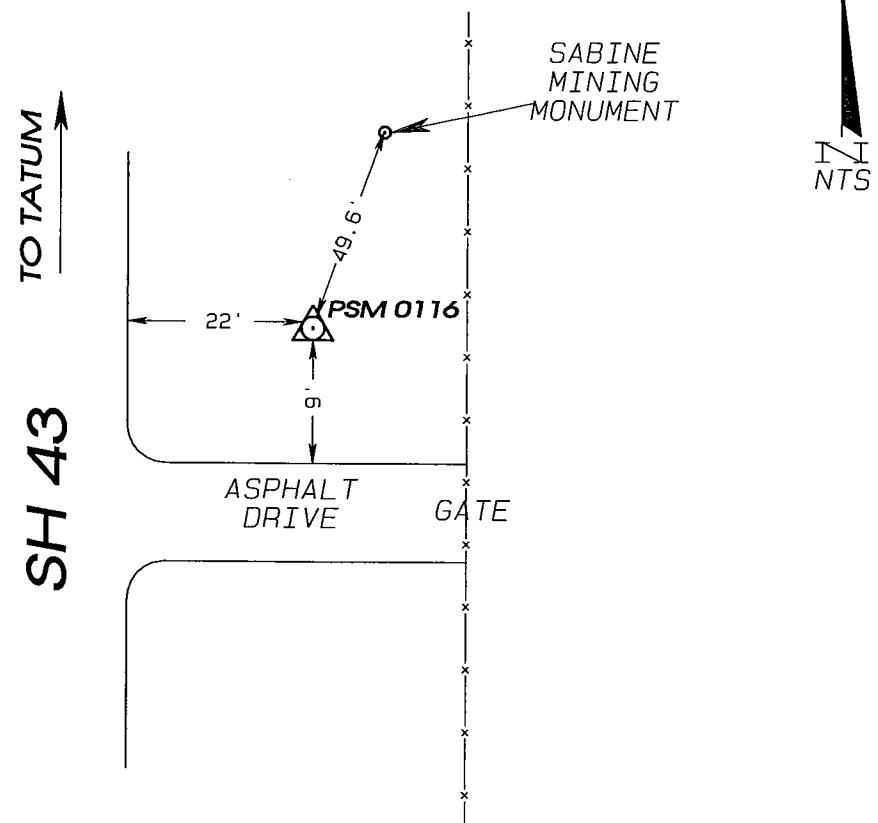
GEODETIC POSITION:

Lat.	32° 35' 54.03601" N
Lon.	94° 43' 20.22741" W

PSM 0115 (DARBY 1)
JOHNSON & PACE CONTROL

PACE SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

Marker is located on the east side of SH 43 near an asphalt drive to a pasture, approximately 400' north of a Rail Road Overpass.

Mark is a 5/8" iron rod placed in concrete with a 2" aluminum cap imprinted "LONNIE C. PACE, II - TEXAS PLS 1573" and field stamped "0116".

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

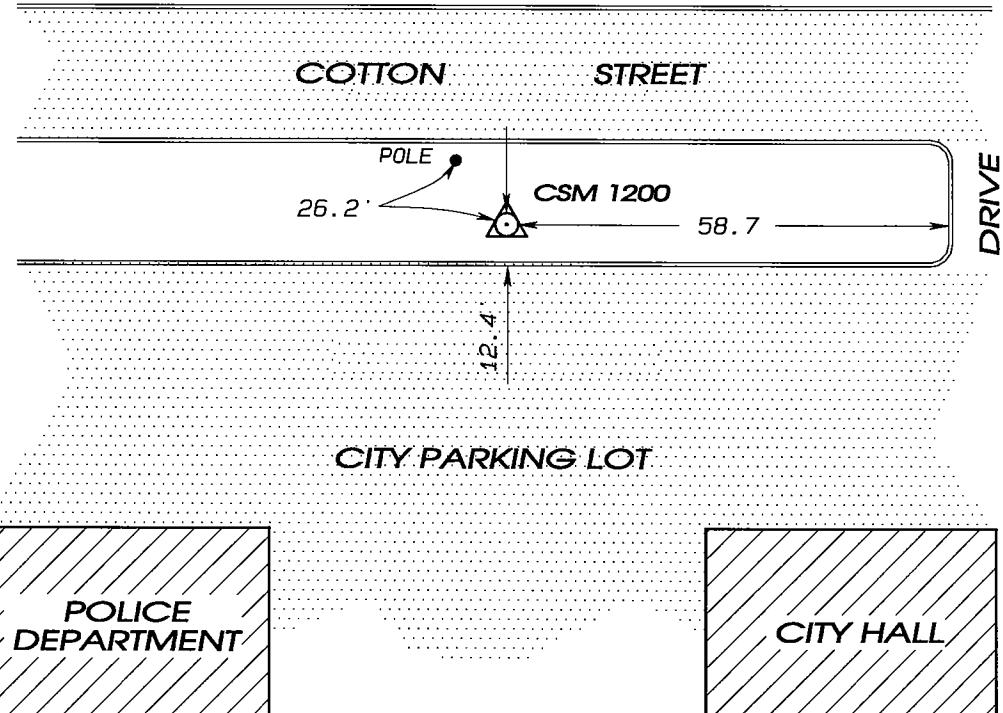
East.	3,143,732.716
North.	6,784,717.264
Elev.	439.55
Convergence	2° 04.381'
Scale Factor	0.99997680

GEODETIC POSITION:

Lat.	32° 13' 16.68848" N
Lon.	94° 41' 56.58879" W

PSM 0116 (SH43/TUMCO)
JOHNSON & PACE CONTROL

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the grounds at City Hall, south of the curb on Cotton Street and north of the curb on the City parking lot

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 125, 769.908
North.	6, 883, 893.178
Elev.	318.76
Convergence	2° 02.856'
Scale Factor	0.99991940

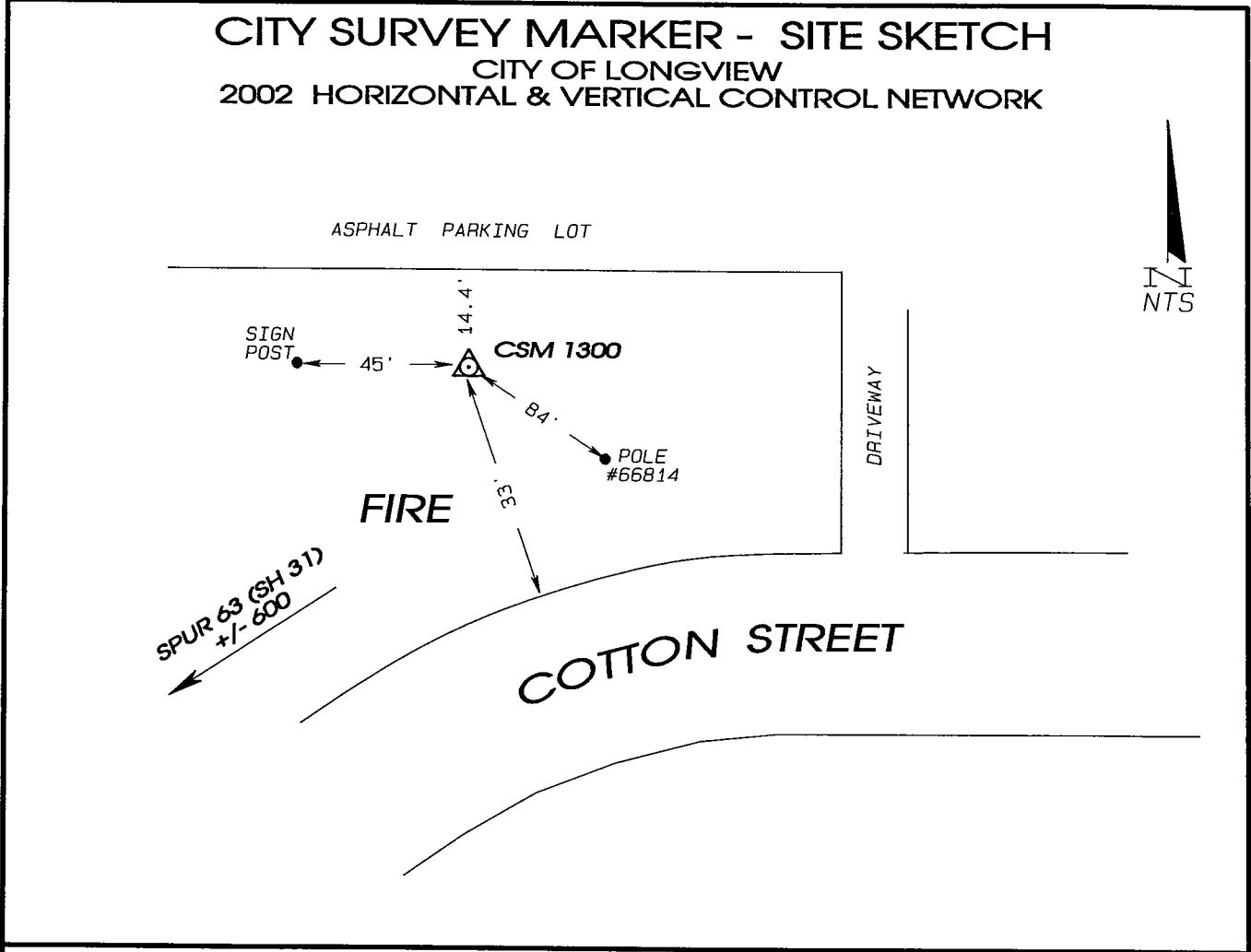
GEODETIC POSITION:

Lat.	32° 29' 43.83841" N
Lon.	94° 44' 44.30433" W

CSM 1200

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the north side of Cotton Street, approximately 1150 feet westerly from City Hall.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

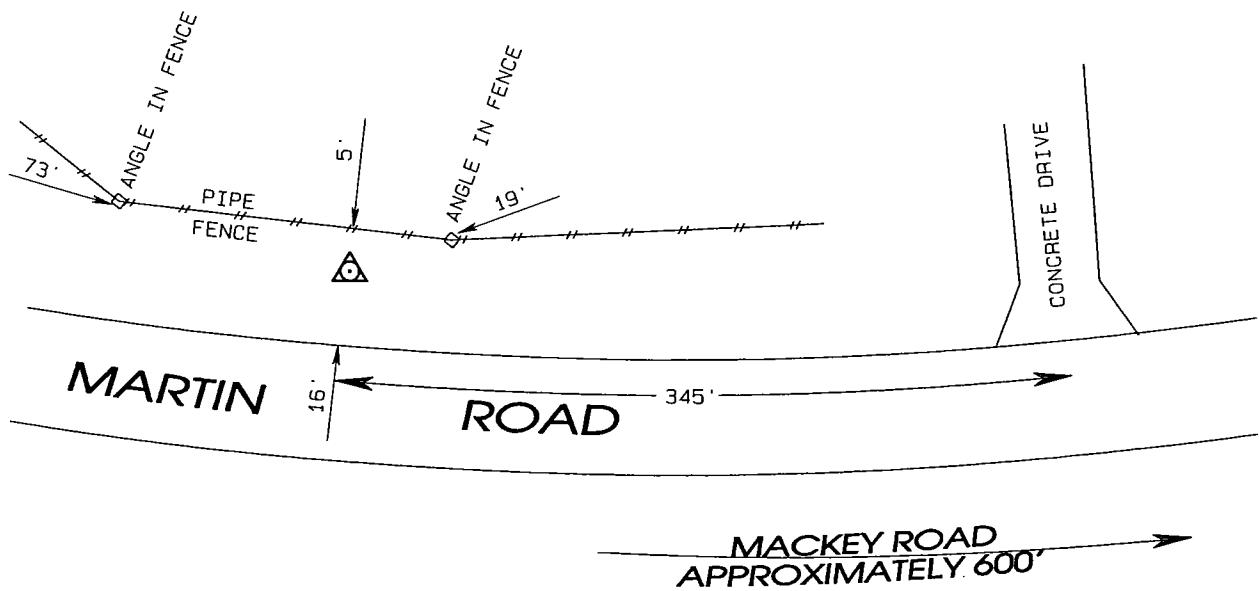
East.	3, 124, 568.728
North.	6, 884, 072.992
Elev.	295.82
Convergence	2° 02.730'
Scale Factor	0.99991930

GEODETIC POSITION:

Lat.	32° 29' 46.04110" N
Lon.	94° 44' 58.24598" W

CSM 1300
AZIMUTH MARKER FOR CSM 1200

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the north side of Martin Road approximately one mile southerly from the intersection with Mackey Road.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 109, 386. 188
Nrth.	6, 930, 846. 268
Elev.	368.88
Convergence	2° 01.294'
Scale Factor	0.99990002

GEODETIC POSITION:

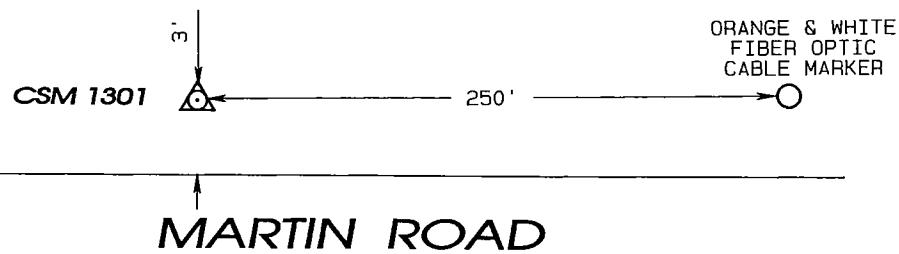
Lat.	32° 37' 33.92731" N
Lon.	94° 47' 36.14935" W

CSM 1201

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

N
NTS



GENERAL LOCATION:

The marker is on the north side of Martin Road approximately 1-1/2 mile southerly from the intersection with Mackey Road.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 107, 381.309
North.	6, 929, 997.076
Elev.	375.30
Convergence	2° 01.078'
Scale Factor	0.99990030

GEODETIC POSITION:

Lat.	32° 37' 26.22855" N
Lon.	94° 47' 59.92876" W

CSM 1301
AZIMUTH MARKER FOR CSM 1201

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

TELEPHONE
PEDESTAL

31.8

CSM 1202

N
NTS

EP

FM 449

HUNTER ROAD
+/- 600'

SAM PAGE ROAD
+/- 2800'

GENERAL LOCATION:

The marker is located north of Longview on FM 449, east of US Highway 259 and .5 mile from Sam Page Road, and north of the pavement

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4"aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 129, 414.602
North.	6, 926, 813.809
Elev.	432.91
Convergence	2° 03.407'
Scale Factor	0.99990173

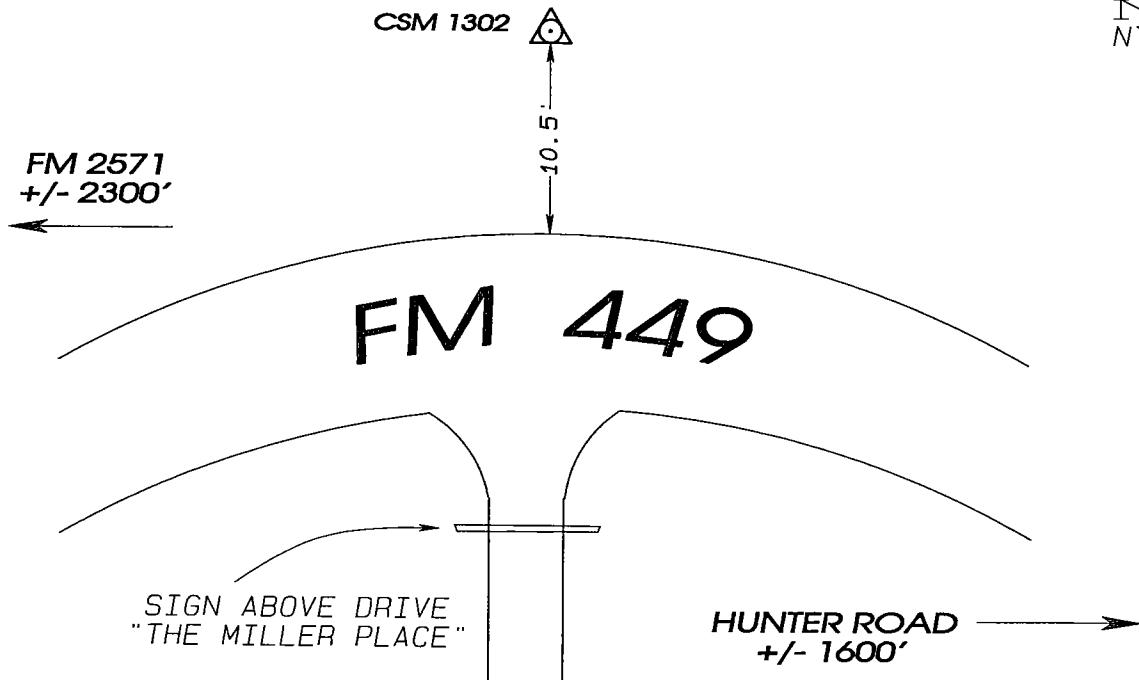
GEODETIC POSITION:

Lat.	32° 36' 46.99707" N
Lon.	94° 43' 43.78804" W

CSM 1202

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the north side of F. M. 449 approximately 1600' west of Hunter's Road and approximately 2300' east of F. M. 2571.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

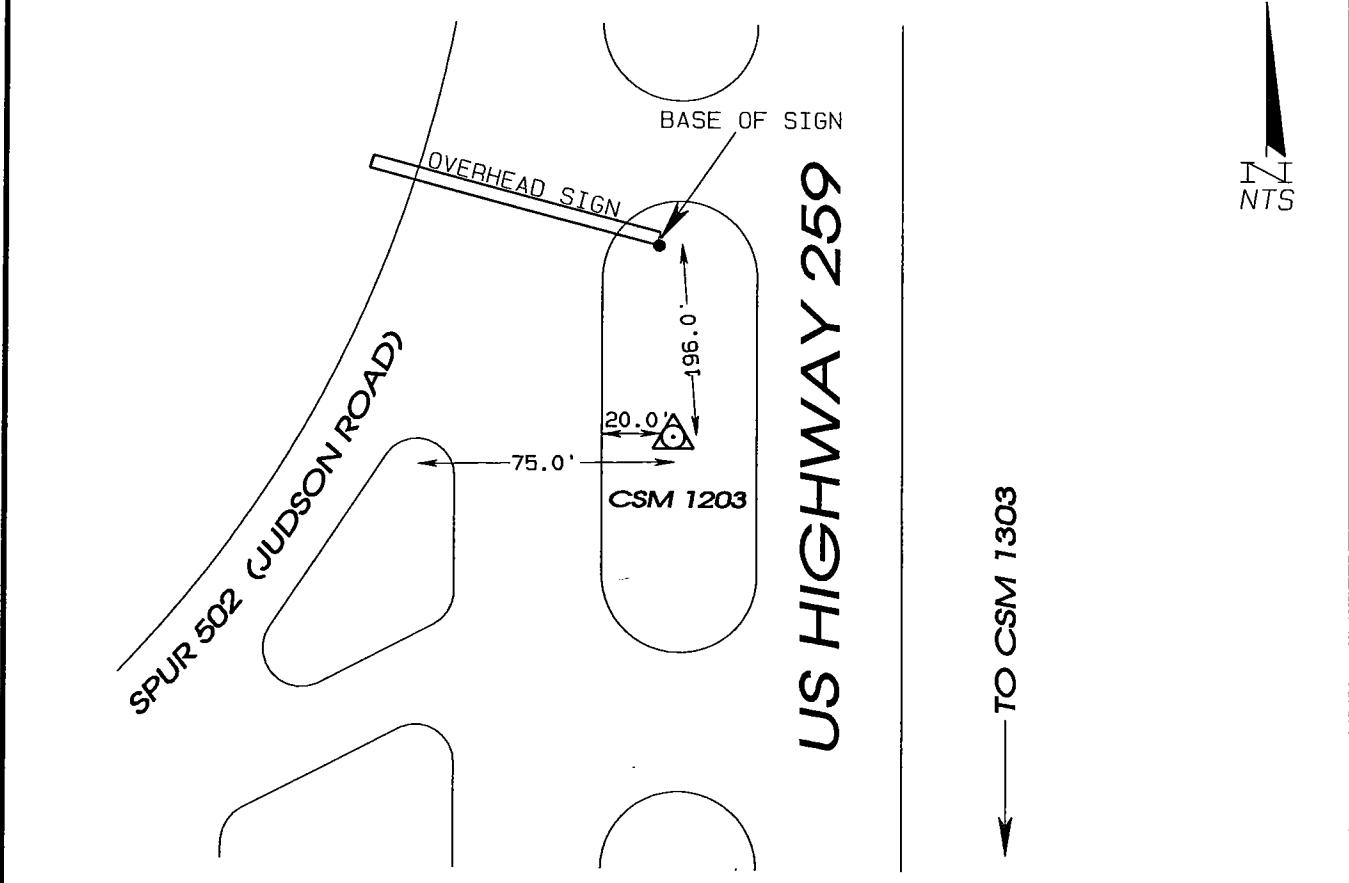
East.	3. 127, 434. 464
North.	6, 927, 894. 345
Elev.	417.62
Convergence	2° 03.200'
Scale Factor	0.99990131

GEODETIC POSITION:

Lat.	32° 36' 58.38532" N
Lon.	94° 44' 06.47209" W

CSM 1302
AZIMUTH MARKER FOR CSM 1202

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located east of the intersection of Spur 502 (Judson Road) and US Highway 259, just south of Hamby Road.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 121, 751.758
North.	6, 923, 412.708
Elev.	401.18
Convergence	2° 02.580'
Scale Factor	0.99990288

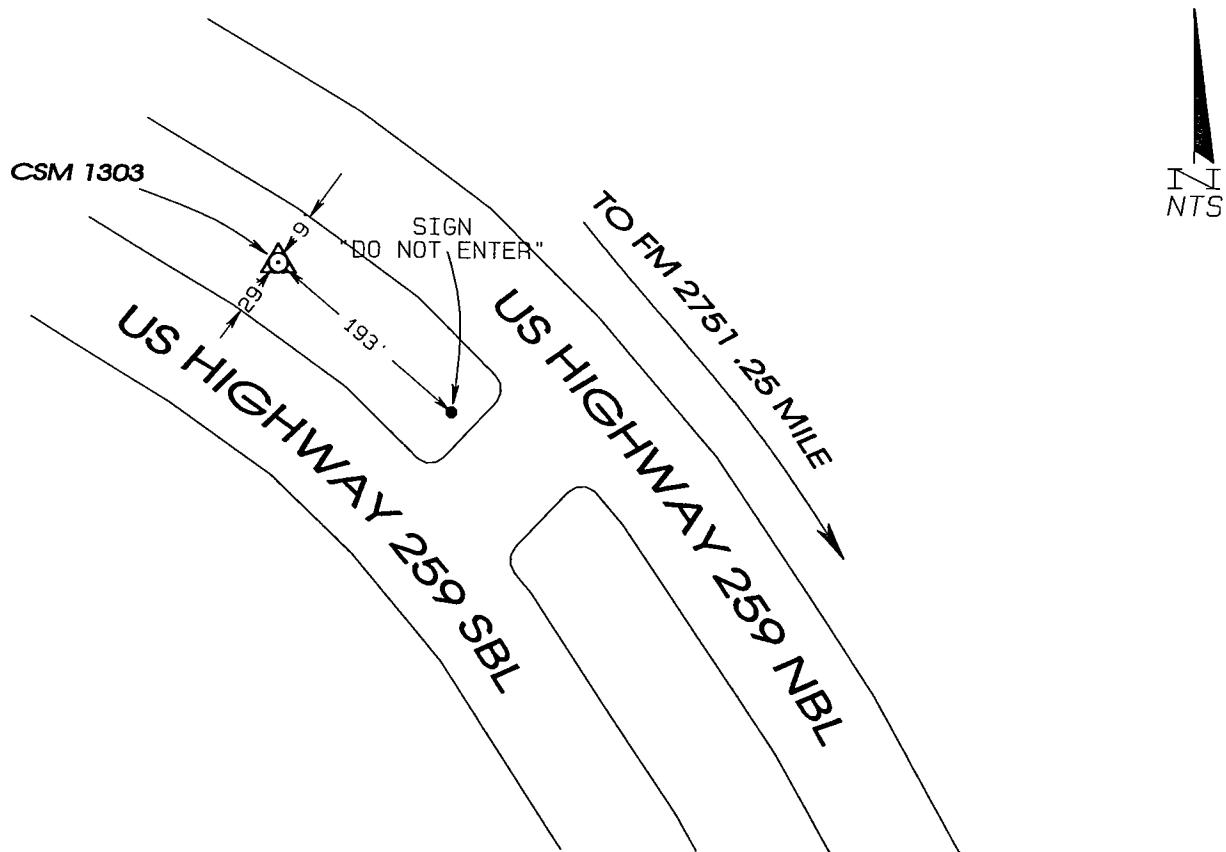
GEODETIC POSITION:

Lat.	32° 36' 16.07526" N
Lon.	94° 45' 14.74191" W

CSM 1203

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located in the center median of US Highway 259, approximately .25 mile north of FM 2751.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 124, 338.015
North.	6, 919, 456.827
Elev.	432.53
Convergence	2° 02.839'
Scale Factor	0.99990440

GEODETIC POSITION:

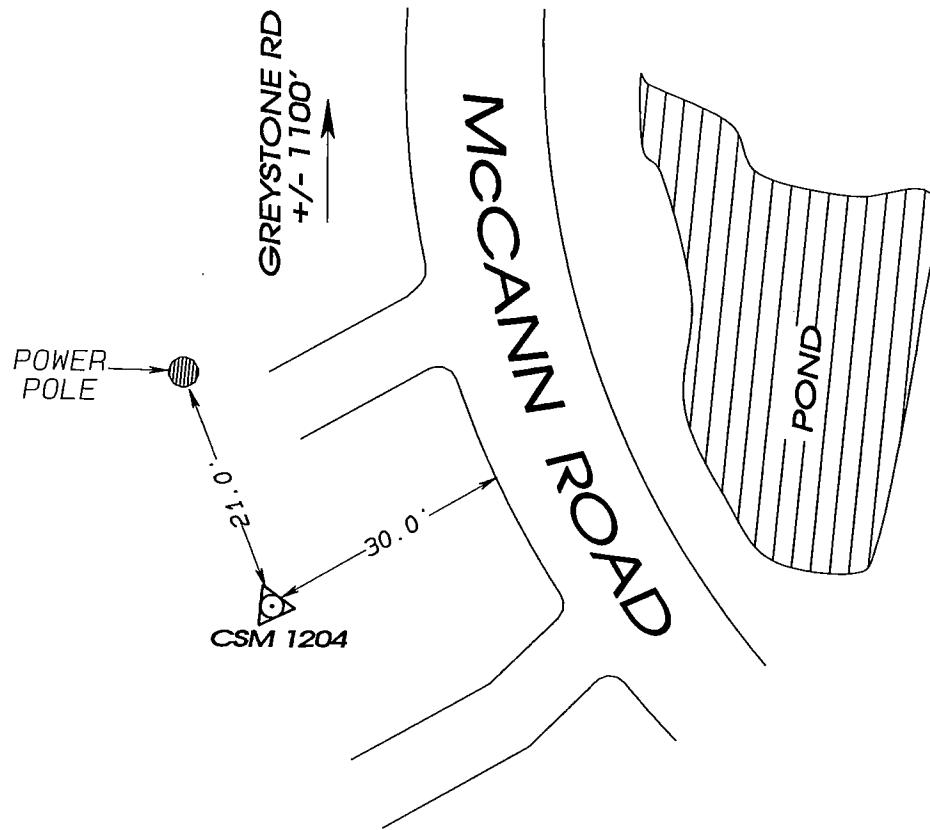
Lat.	32° 35' 36.04133" N
Lon.	94° 44' 46.17805" W

CSM 1303
AZIMUTH MARKER FOR CSM 1203

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

N
NTS



GENERAL LOCATION:

The marker is on McCann Road north of Plier Precise Road, on the west side of the street, across the street from the pond.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 116, 184.797
North.	6, 910, 727.563
Elev.	399.48
Convergence	2° 01.941'
Scale Factor	0.99990769

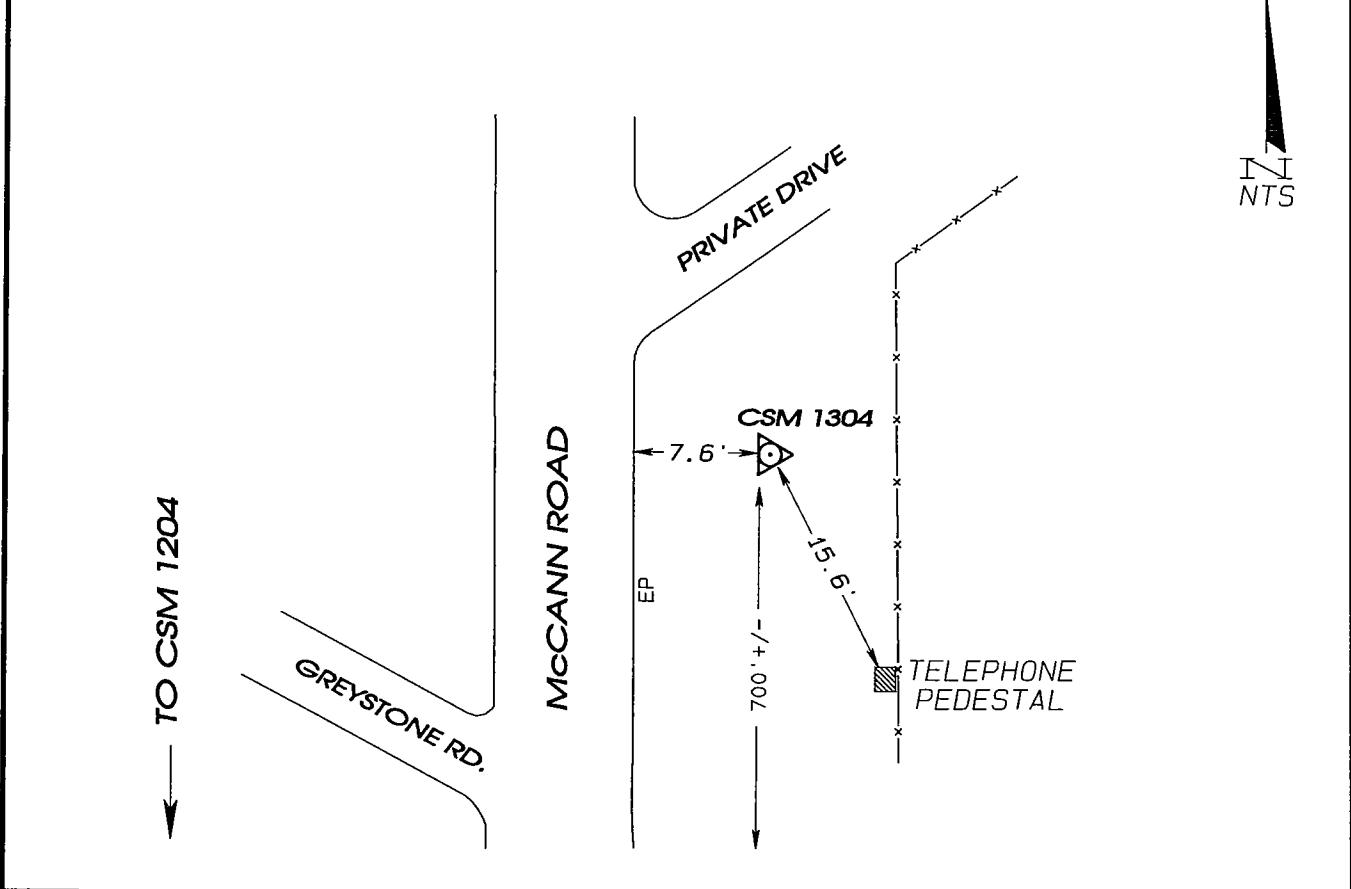
GEODETIC POSITION:

Lat.	32° 34' 12.58712" N
Lon.	94° 46' 25.04225" W

CSM 1204

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of Spring Hill Road on McCann Road, and north of Greystone, on the east side of the street.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 115, 420.647
North.	6, 912, 370.900
Elev.	418.67
Convergence	2° 01.866'
Scale Factor	0.99990703

GEODETIC POSITION:

Lat.	32° 34' 29.10667" N
Lon.	94° 46' 33.28607" W

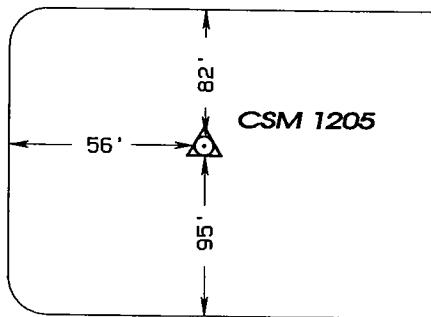
CSM 1304
AZIMUTH MARKER FOR CSM 1204

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



US HIGHWAY 259
(EASTMAN ROAD)



Z - TEAM
KAWASAKI

GENERAL LOCATION:

The marker is located on US Highway 259, north of Loop 281 and in front of Z Team Motor Sports, between the parking lot and the drainage ditch.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 128, 207.082
North.	6, 911, 152.806
Elev.	397.59
Convergence	2° 03.219'
Scale Factor	0.99990769

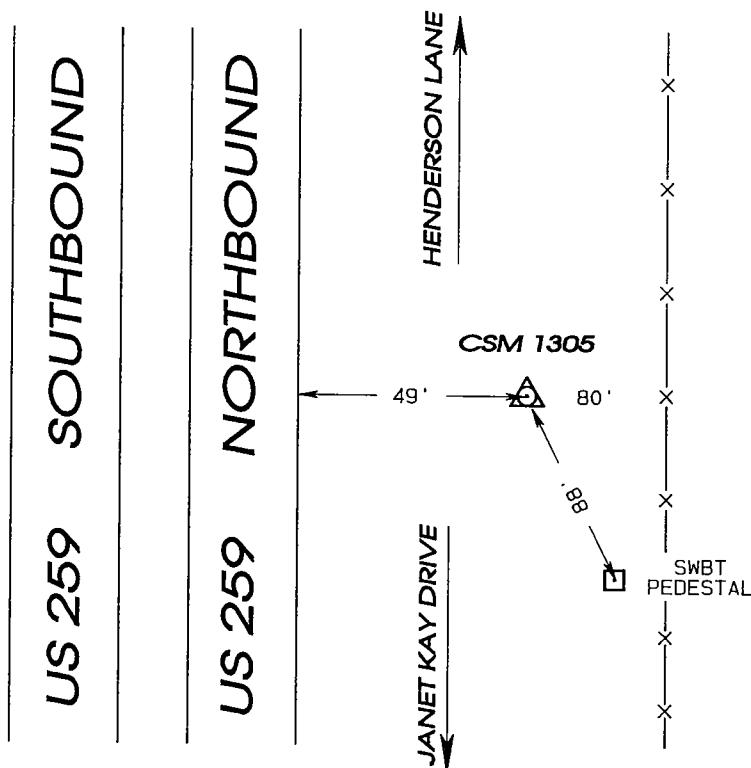
GEODETIC POSITION:

Lat.	32° 34' 12.55134" N
Lon.	94° 44' 04.45884" W

CSM 1205

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the east side of US 259, between Janet Kay Drive and Henderson Lane.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 129, 183.908
North.	6, 907, 968.344
Elev.	391.28
Convergence	2° 03.310'
Scale Factor	0.99990899

GEODETIC POSITION:

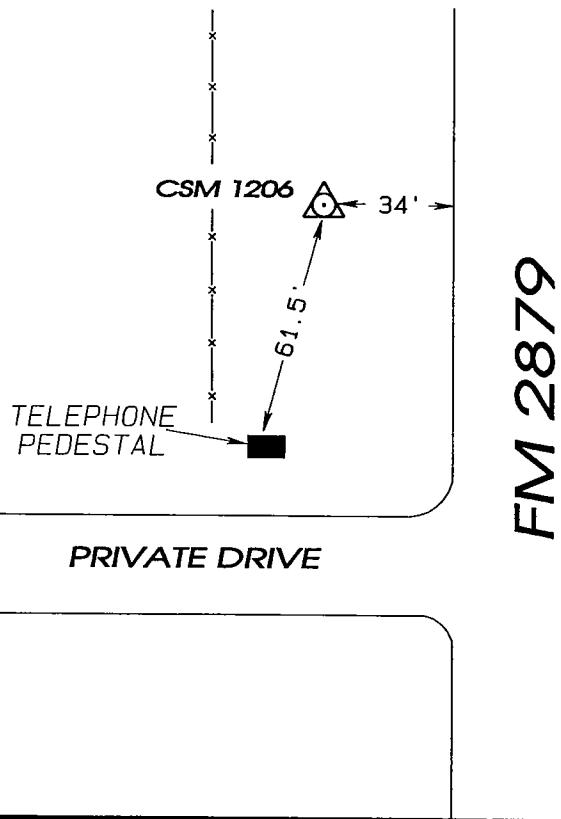
Lat.	32° 33' 40.71312" N
Lon.	94° 43' 54.38532" W

CSM 1305
AZIMUTH MARKER FOR CSM 1205

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

NTS



FM 2879

TO CSM 1306

GENERAL LOCATION:

The marker is located on FM 2879 south of FM 449 approximately ?? miles, on the west side of the road in front of a residence, on the crest of a hill.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 142, 179.410
North.	6, 920, 001.292
Elev.	387.65
Convergence	2° 04.736'
Scale Factor	0.99990444

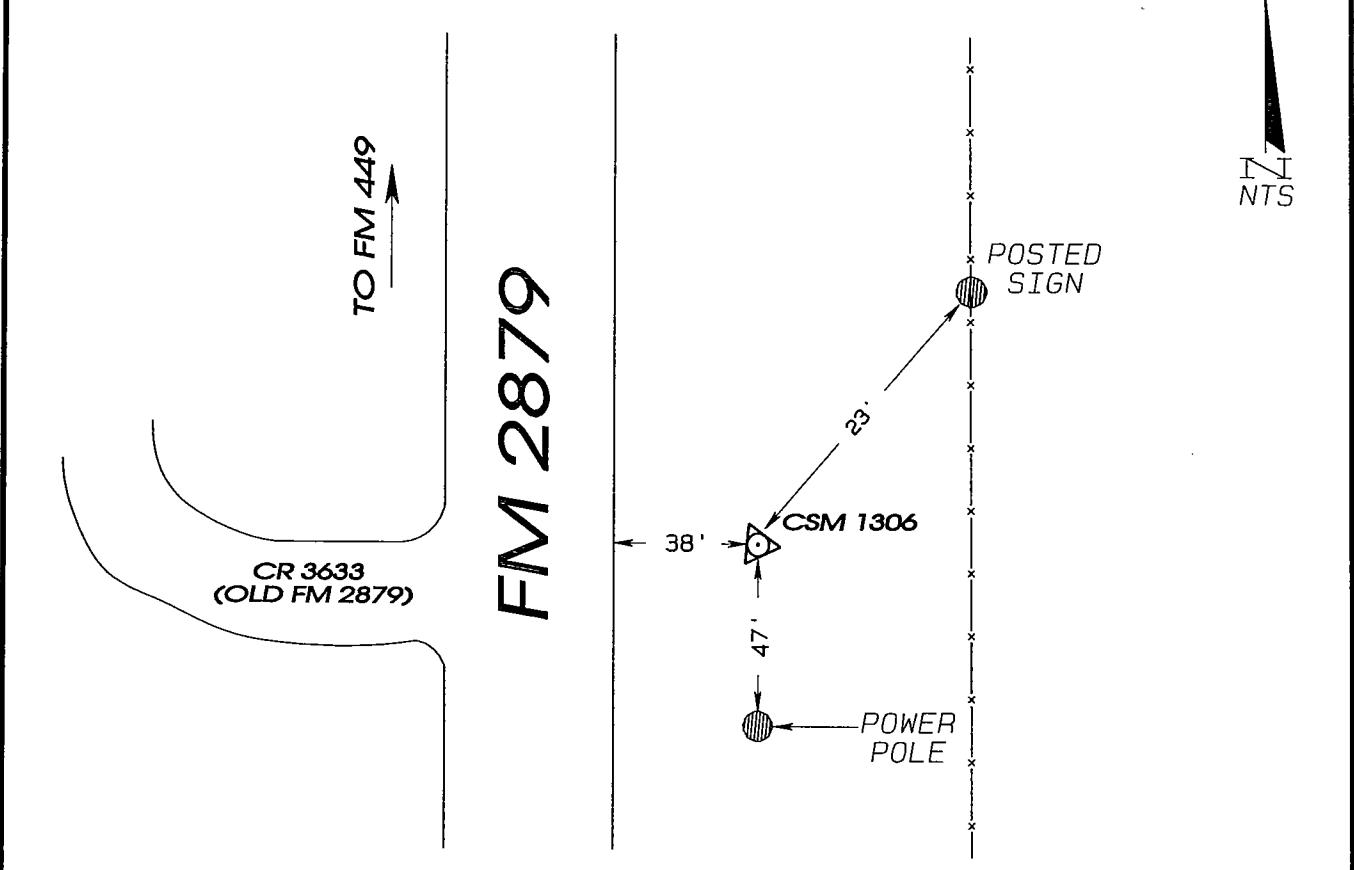
GEODETIC POSITION:

Lat.	32° 35' 35.06971" N
Lon.	94° 41' 17.53087" W

CSM 1206

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is in the right of way of FM 2879 adjacent to the intersection with CR 3633 (Old FM 2879)

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 141, 973.539
North.	6, 916, 603.973
Elev.	387.87
Convergence	2° 04.701'
Scale Factor	0.99990574

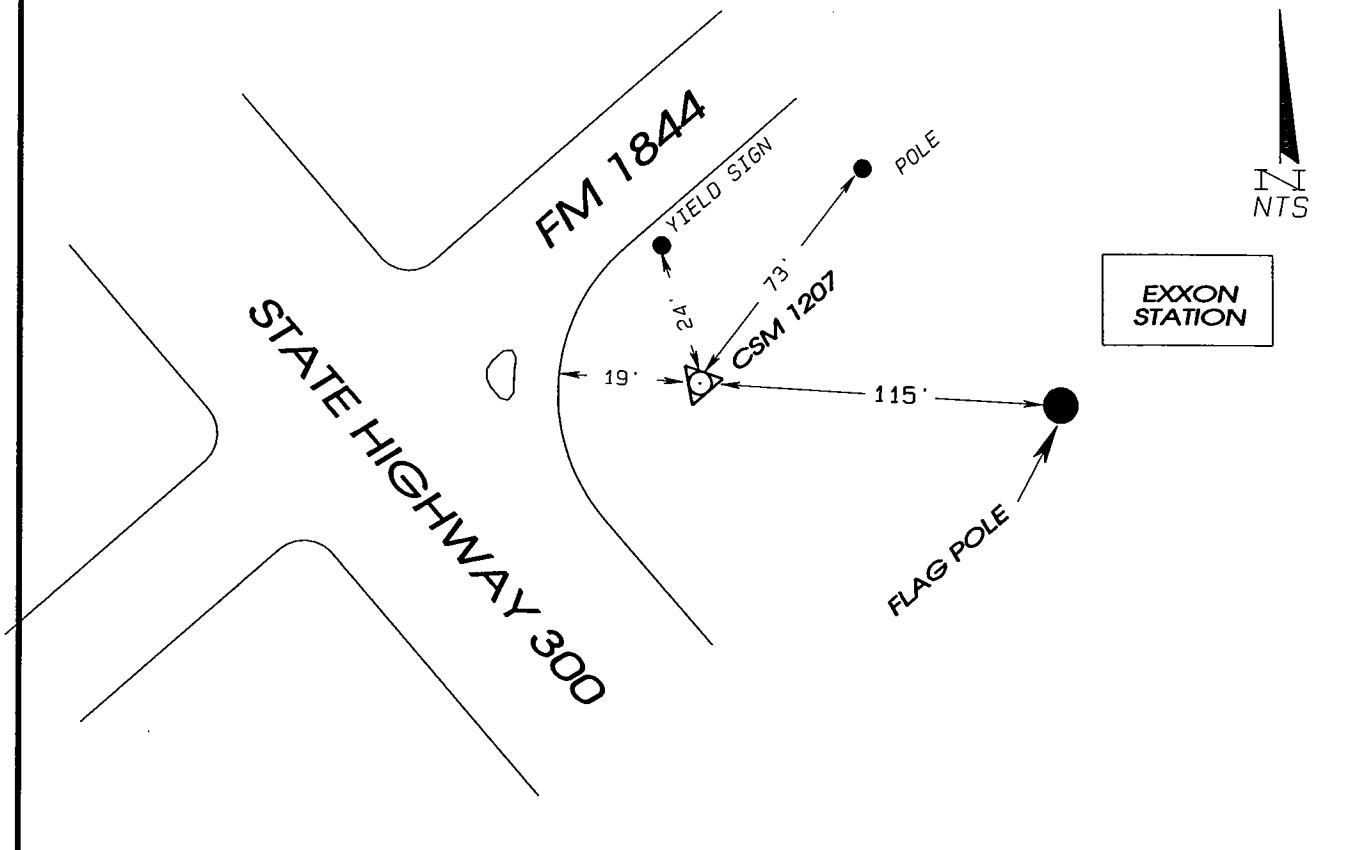
GEODETIC POSITION:

Lat.	32° 35' 01.54744" N
Lon.	94° 41' 21.37597" W

CSM 1306
AZIMUTH MARKER FOR CSM 1206

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located at the intersection of State Highway 300 and FM 1844, on the southeast side of the intersection.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 101, 697. 394
North.	6, 917, 832. 555
Elev.	435. 81
Convergence	2° 00' 42"
Scale Factor	0. 99990471

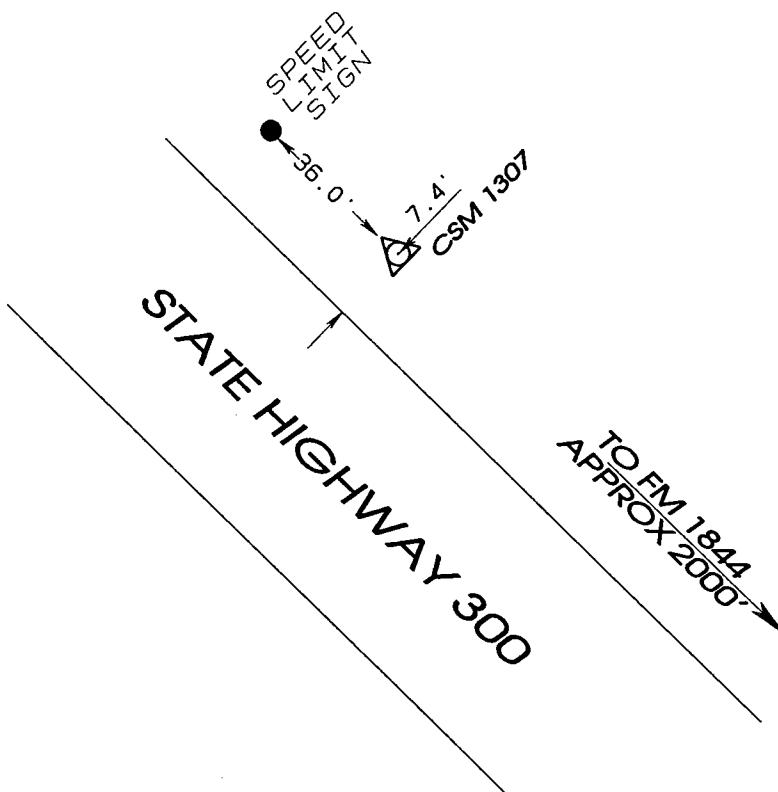
GEODETIC POSITION:

Lat.	32° 35' 27.90371" N
Lon.	94° 49' 11.33388" W

CSM 1207

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of the intersection of State Highway 300 and FM 1844, approximately 1800' on the east side of SH 300.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet,

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 100, 125.004
North.	6, 919, 064.837
Elev.	454.24
Convergence	2° 00.267'
Scale Factor	0.99990422

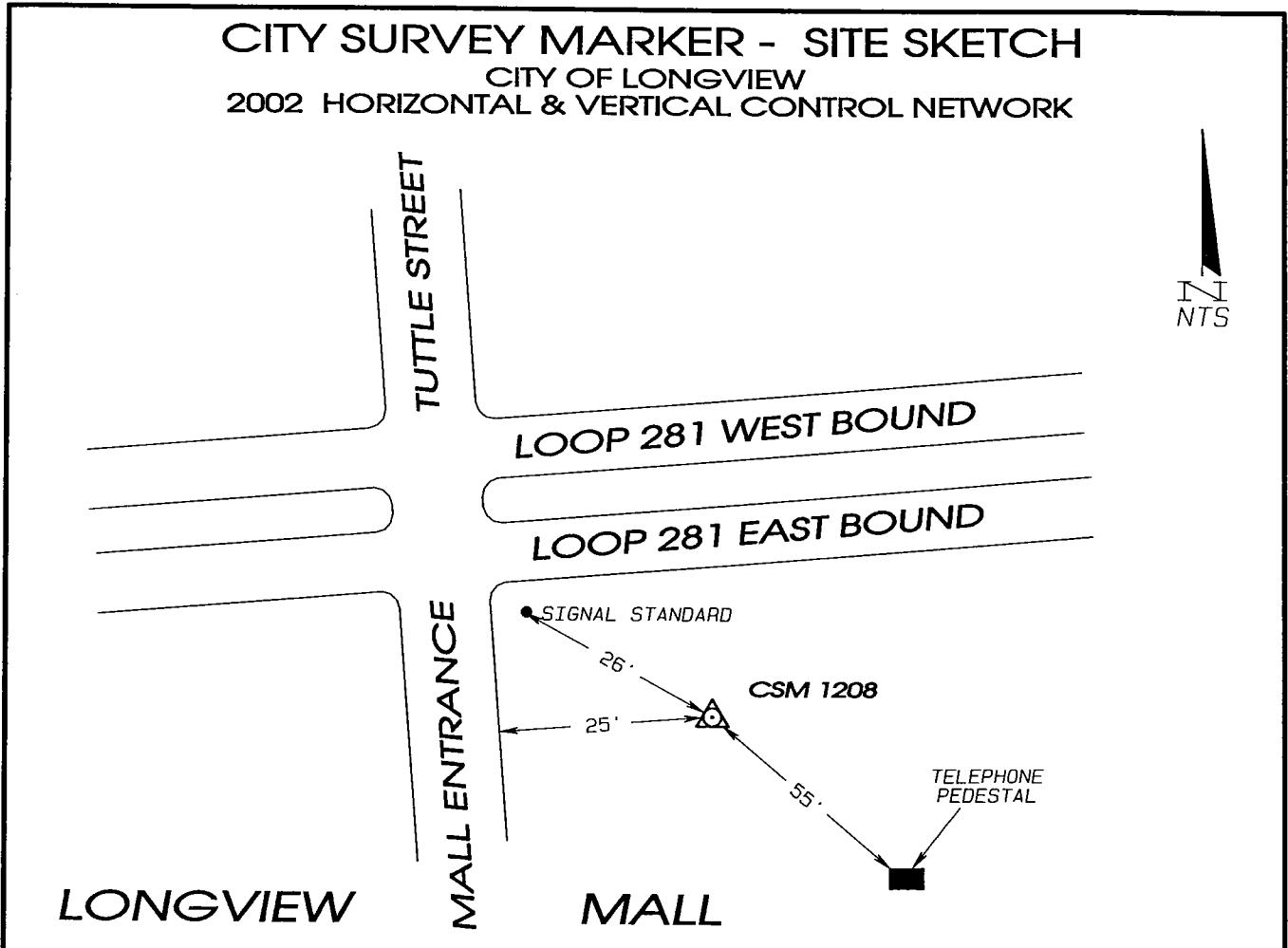
GEODETIC POSITION:

Lat.	32° 35' 40.63493" N
Lon.	94° 49' 29.19850" W

CSM 1307
AZIMUTH MARKER FOR CSM 1207

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is in the right of way on the south side of Loop 281, east of the Tuttle Street entrance to Longview Mall.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,123,580.752
North.	6,900,616.487
Elev.	349.73
Convergence	2° 02.688'
Scale Factor	0.99991196

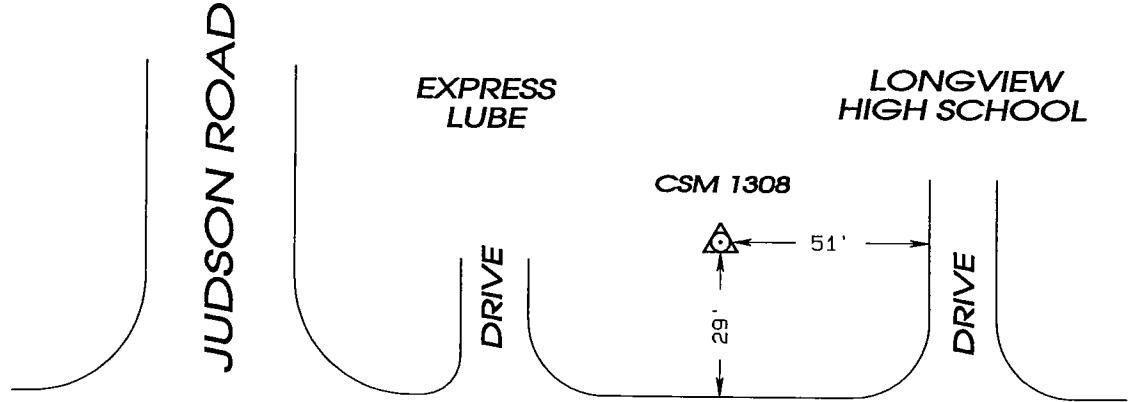
GEODETIC POSITION:

Lat.	32° 32' 29.99250" N
Lon.	94° 45' 02.88229" W

CSM 1208

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



LOOP NO. 281

GENERAL LOCATION:

The marker is located on the north side of Loop 281 between the entrance for the Longview Highschool Bodyshop, and the entrance for the Texaco Xpress Lube, east of Judson Road.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 125, 351, 301
North.	6, 900, 968, 324
Elev.	384.37
Convergence	2° 02.877'
Scale Factor	0.99991184

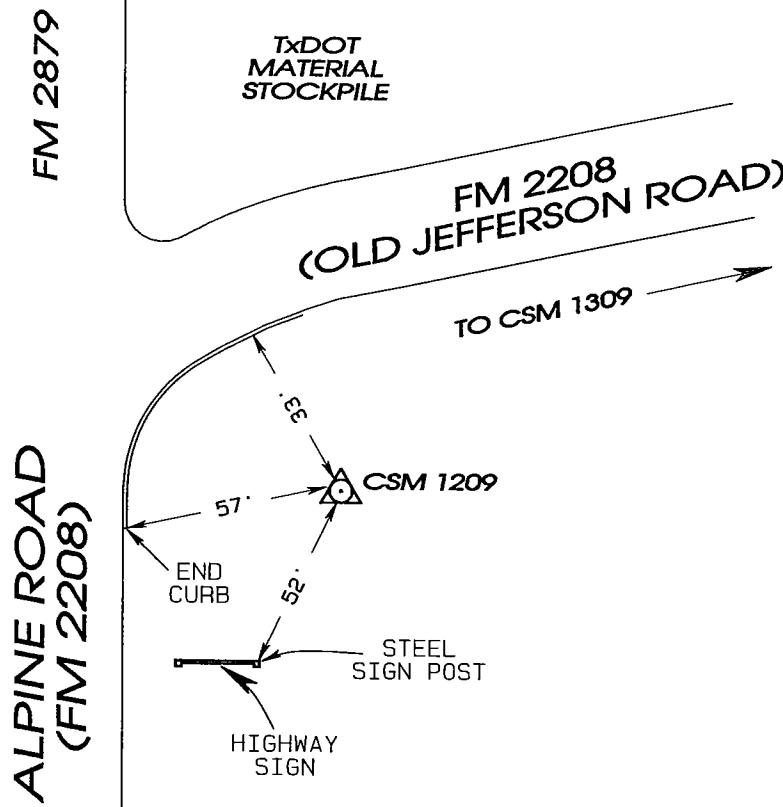
GEODETIC POSITION:

Lat.	32° 32' 32.84626" N
Lon.	94° 44' 42.06414" W

CSM 1308
AZIMUTH MARKER FOR CSM 1208

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is north of Loop 281 on Alpine Road (FM 2208) at the intersection of Alpine and FM 2879. On the East side of Alpine.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 139, 084. 195
North.	6, 900, 276. 100
Elev.	411.92
Convergence	2° 04.332'
Scale Factor	0.99991234

GEODETIC POSITION:

Lat.	32° 32' 21.11573" N
Lon.	94° 42' 02.02524" W

CSM 1209

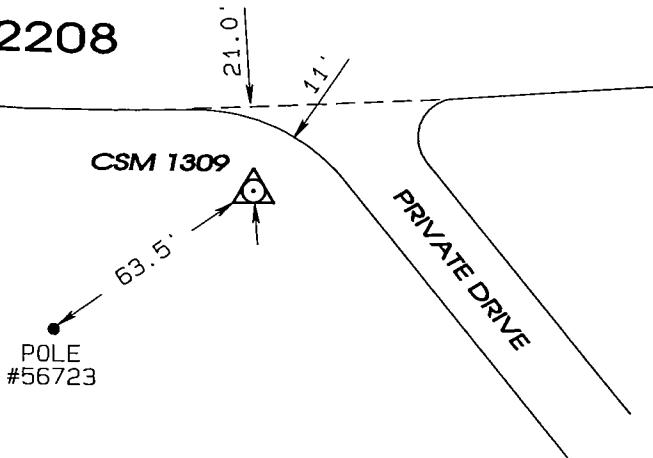
CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



FM 2208

FM 2879



GENERAL LOCATION:

The marker is located on the south side of FM 2208, .7 mile from Alpine Road.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 141, 168.889
North.	6, 901, 393.294
Elev.	424.43
Convergence	2° 04.557'
Scale Factor	0.99991190

GEODETIC POSITION:

Lat.	32° 32' 31.41713" N
Lon.	94° 41' 37.21465" W

CSM 1309
AZIMUTH MARKER FOR CSM 1209

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

TO LONGVIEW

NTS

US HIGHWAY 80 WEST BOUND

CROSS
OVER

CSM 1210

221'

↓

US HIGHWAY 80 EAST BOUND

TO HALLSVILLE

TRINITY
INDUSTRIES

GENERAL LOCATION:

The marker is located east of Longview on US Highway 80 in the median west of the Trinity entrance between Hall and Lawrence Roads.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 155, 286, 198
North.	6, 888, 057, 028
Elev.	340.41
Convergence	2° 06.003'
Scale Factor	0.99991798

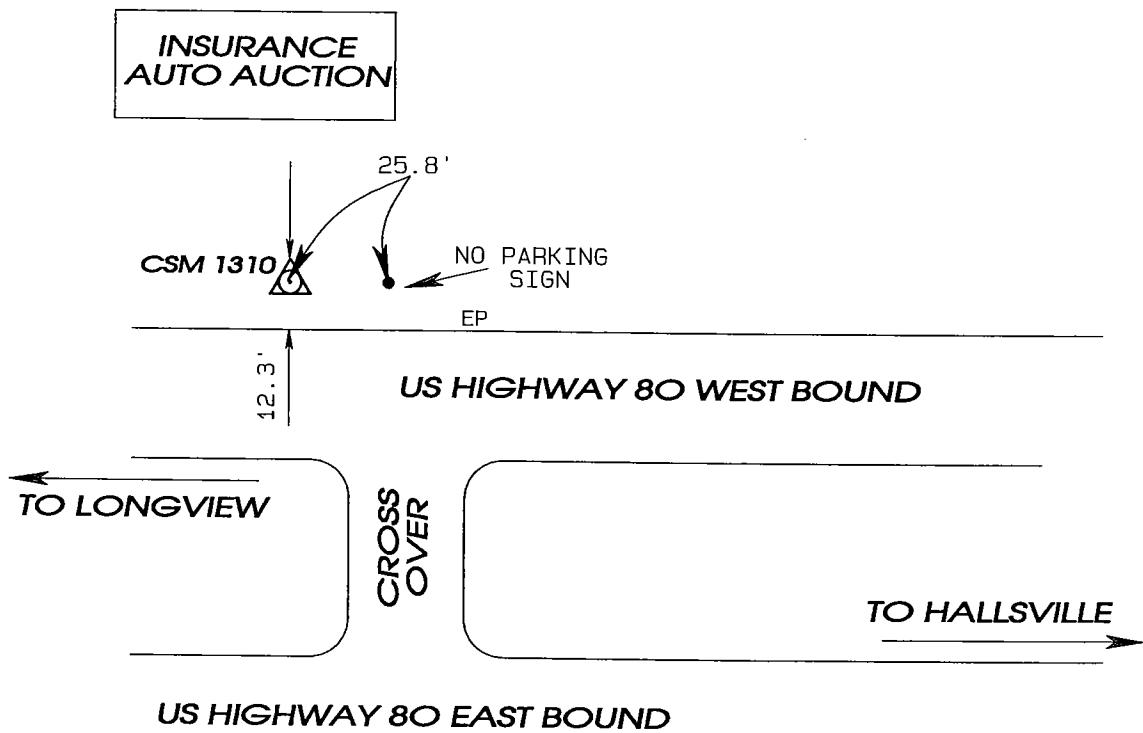
GEODETIC POSITION:

Lat.	32° 30' 14.44539" N
Lon.	94° 38' 58.10826" W

CSM 1210

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located in the center median of US Highway 80 east of Longview, near the cross over at the Auto Auction.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

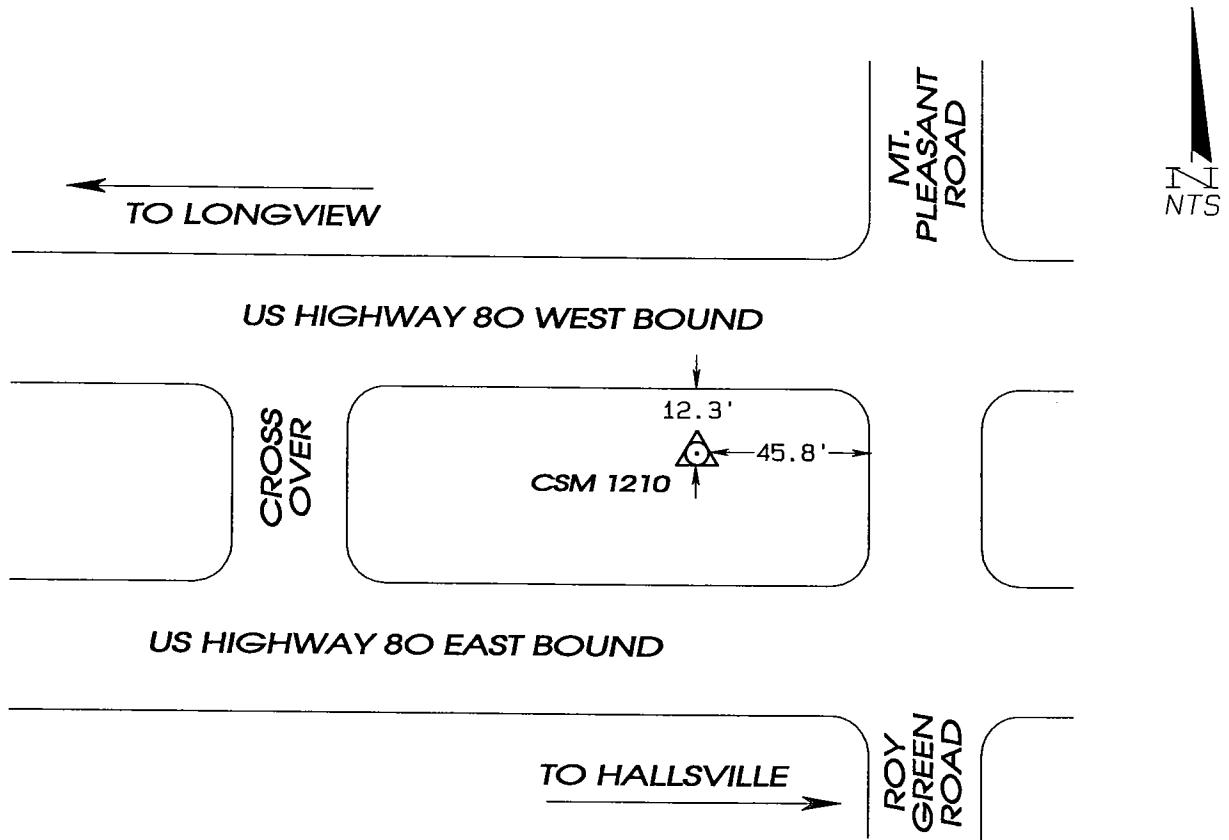
East.	3, 157, 377.344
North.	6, 888, 635.706
Elev.	368.22
Convergence	2° 06.227'
Scale Factor	0.99991775

GEODETIC POSITION:

Lat.	32° 30' 19.40891" N
Lon.	94° 38' 33.45714" W

CSM 1310
AZIMUTH MARKER FOR CSM 1210

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located east of Longview at the intersection of US Highway 80 and Mt. Pleasant Raod.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4"aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 167, 514.611
North.	6, 890, 977.533
Elev.	396.268
Convergence	2° 07.312'
Scale Factor	0.99991687

GEODETIC POSITION:

Lat.	32° 30' 38.86848" N
Lon.	94° 36' 34.14521" W

CSM 1211

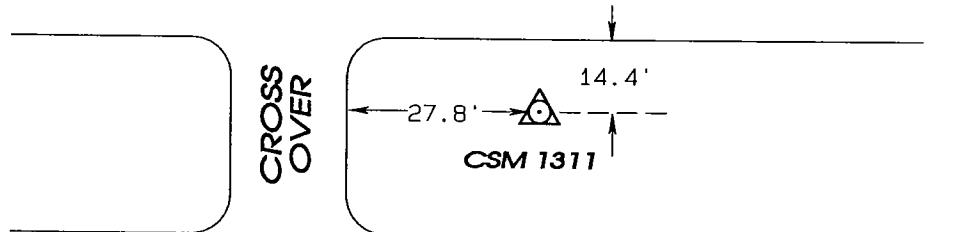
CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

SHIRLEY
EQUIPMENT
CO.

N
NTS

TO LONGVIEW

US HIGHWAY 80 WEST BOUND



US HIGHWAY 80 EAST BOUND

TO HALLSVILLE

GENERAL LOCATION:

The marker is located in the center median of US Highway 80 east of Longview, near the crossover at Shirley Equipment Company.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 165, 257, 939
North.	6, 890, 442, 567
Elev.	398.60
Convergence	2° 07.070'
Scale Factor	0.99991707

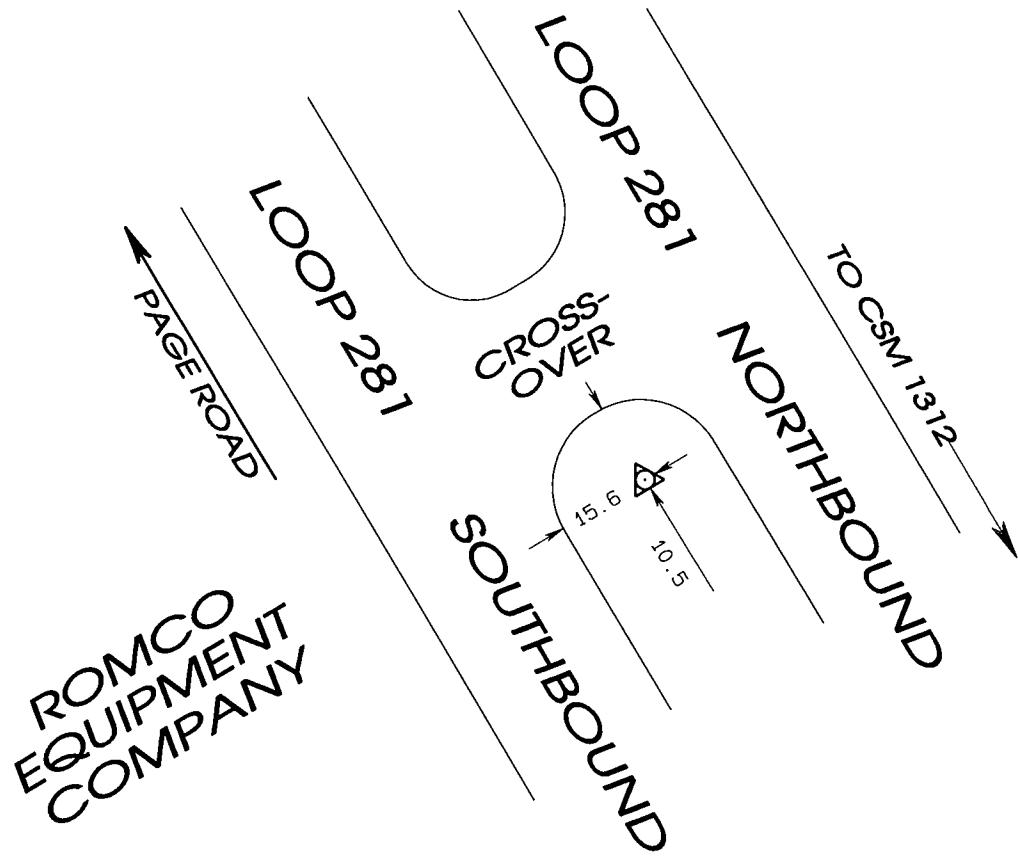
GEODETIC POSITION:

Lat.	32° 30' 34.40434" N
Lon.	94° 37' 00.71256" W

CSM 1311
AZIMUTH MARKER FOR CSM 1211

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is in the median of loop 281, south of Page Road and east of ROMCO Equipment Co.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3, 144, 780. 300
North. 6, 892, 384. 382
Elev. 373. 19
Convergence 2° 04. 906°
Scale Factor 0.99991586

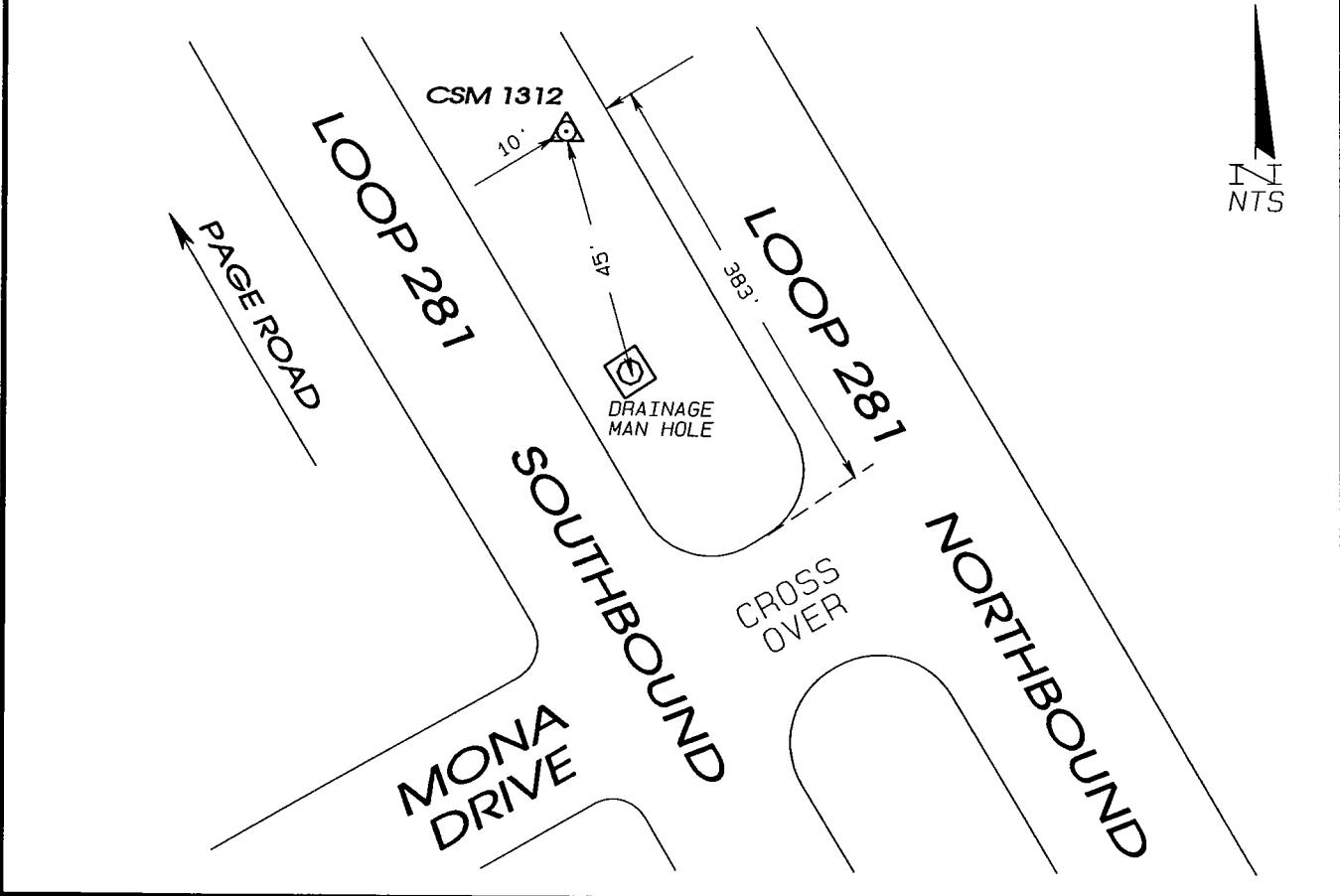
GEODETIC POSITION:

Lat. 32° 31' 01.03142" N
Lon. 94° 40' 58.87510" W

CSM 1212

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is in the median of LOOP 281, 383 feet northwest of Mona Drive.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 146, 767.737
North.	6, 890, 086.318
Elev.	323.38
Convergence	2° 05.108'
Scale Factor	0.99991692

GEODETIC POSITION:

Lat.	32° 30' 37.59089" N
Lon.	94° 40' 36.65519" W

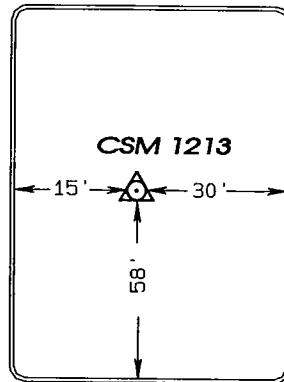
CSM 1312
AZIMUTH MARKER FOR CSM 1212

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

LONGVIEW
WELLNESS
CENTER
#1107

N
NTS



EAST MARSHALL AVENUE

GENERAL LOCATION:

The marker is on the grounds of the Longview Wellness Center in a curbed grassy area between the building and Marshall Avenue.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3, 132, 151.752
North. 6, 887, 002.599
Elev. 378.04
Convergence 2°03.545°
Scale Factor 0.99991808

GEODETIC POSITION:

Lat. 32° 30' 12.32531" N
Lon. 94° 43' 28.53056" W

CSM 1213

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

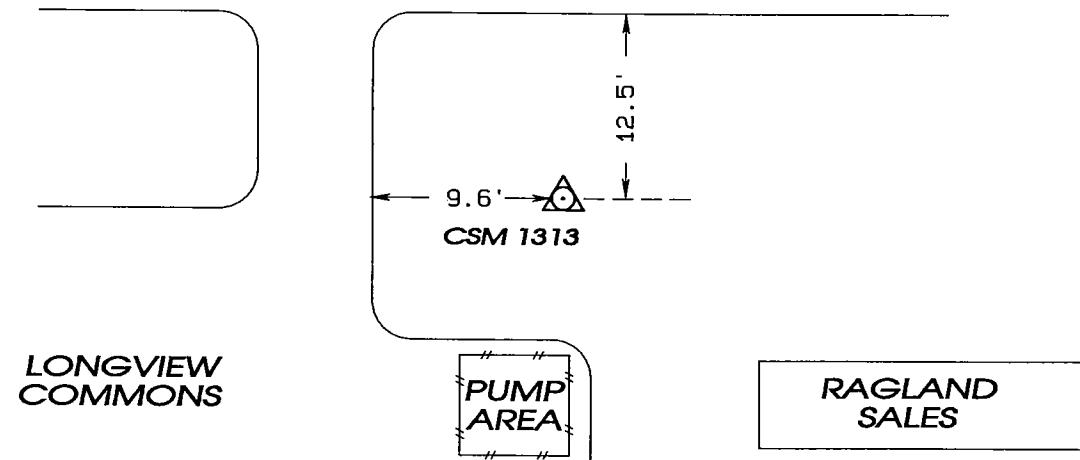
JOHNNY CACES

TO DOWNTOWN

TO US 259

N
NTS

US HIGHWAY 80



GENERAL LOCATION:

The marker is located south of US Highway 80 at the Ragland Sales and across the street from Johnny Caces.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 134, 330.567
North.	6, 887, 259.972
Elev.	377.36
Convergence	2° 03.777'
Scale Factor	0.99991800

GEODETIC POSITION:

Lat.	32° 30' 14.09511" N
Lon.	94° 43' 02.99575" W

CSM 1313
AZIMUTH MARKER FOR CSM 1213

CITY SURVEY MARKER - SITE SKETCH

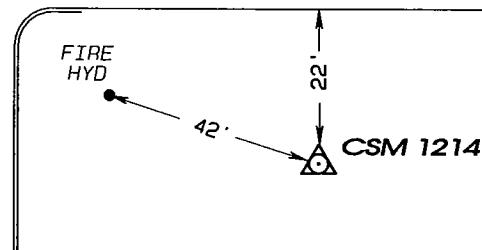
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

COTTON

STREET

N
NTS

EASTMAN ROAD
(US 259 - SH 149)



GENERAL LOCATION:

The marker is on the south east corner of the intersection of Cotton Street and Eastman Road (US Highway 259), across Eastman Road from the Chevron Station.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4"aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 137, 652.912
North.	6, 883, 015.131
Elev.	342.41
Convergence	2°04.113'
Scale Factor	0.99992000

GEODETIC POSITION:

Lat.	32° 29' 30.93235" N
Lon.	94° 42' 26.01335" W

CSM 1214

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

CSM 1314

13.4'

SANTE FE RR

111'

EASTMAN ROAD
CUS 259 - SH 149)

COTTON STREET
+/- 1600'

N
NTS

GENERAL LOCATION:

The marker is located on US Highway 259, (Eastman Road), south of the intersection of US 259 and Cotton Street, on the west side of the road.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 137, 652.988
North.	6, 881, 358.098
Elev.	336.53
Convergence	2° 04.107'
Scale Factor	0.99992078

GEODETIC POSITION:

Lat.	32° 29' 14.54578" N
Lon.	94° 42' 26.71078" W

CSM 1314
AZIMUTH MARKER FOR CSM 1214

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

N
NTS

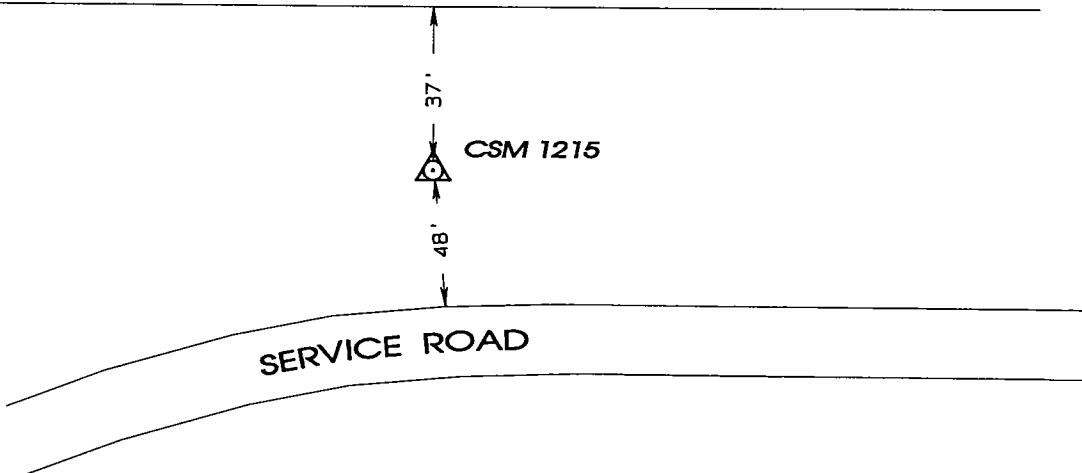
WESTBOUND

LANES

IH 20

EASTBOUND

LANES



GENERAL LOCATION:

The marker is located east of Longview on the service road for I-20, east of the intersection of Lansing Switch Road and the service road. There is not an exit for Lansing Switch Road from I-20.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 165, 470.053
North.	6, 874, 953.365
Elev.	340.84
Convergence	2°07.032'
Scale Factor	0.99992432

GEODETIC POSITION:

Lat.	32° 28' 01.15751" N
Lon.	94° 37' 04.91978" W

CSM 1215

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

CSM 1315



65'

35'

WESTBOUND

IH 20

EASTBOUND

LANSING SWITCH ROAD
OVERPASS

LANES

LANES

N
NTS

GENERAL LOCATION:

The marker is located on the north side of Interstate 20 at Lansing Switch Road and on the west side of Lansing Switch. Note, there is no exit for Lansing Switch off of the Interstate.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 164, 301.519
North.	6, 874, 921.905
Elev.	374.75
Convergence	2° 06.908'
Scale Factor	0.99992431

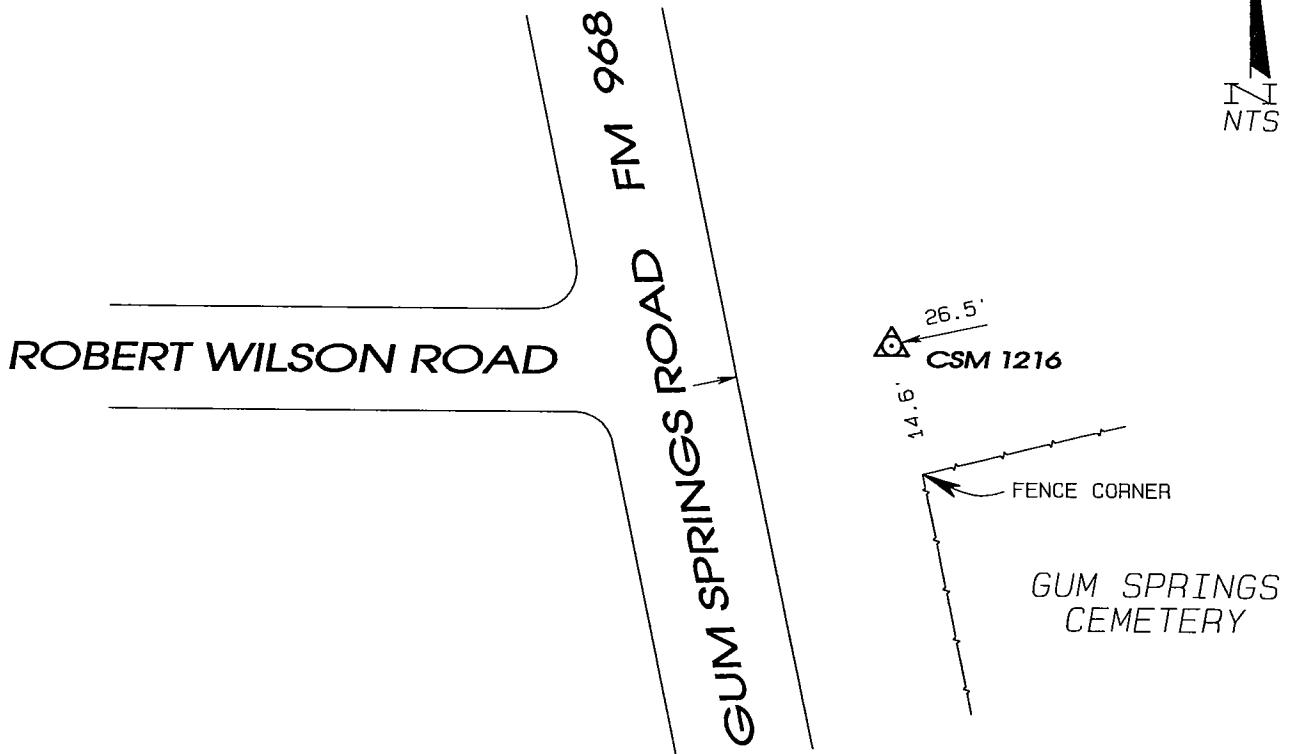
GEODETIC POSITION:

Lat.	32° 28' 01.27339" N
Lon.	94° 37' 18.56403" W

CSM 1315
AZIMUTH MARKER FOR CSM 1215

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on Gum Springs Road (FM 968) east of US Highway 259 (Eastman Road) at the intersection of Gum Springs Road and Robert Wilson Road, approximately .6 miles west of Loop 281.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4"aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 143, 889.853
North.	6, 872, 663.417
Elev.	330.91
Convergence	2°04.735'
Scale Factor	0.99992505

GEODETIC POSITION:

Lat.	32° 27' 46.33039" N
Lon.	94° 41' 17.62337" W

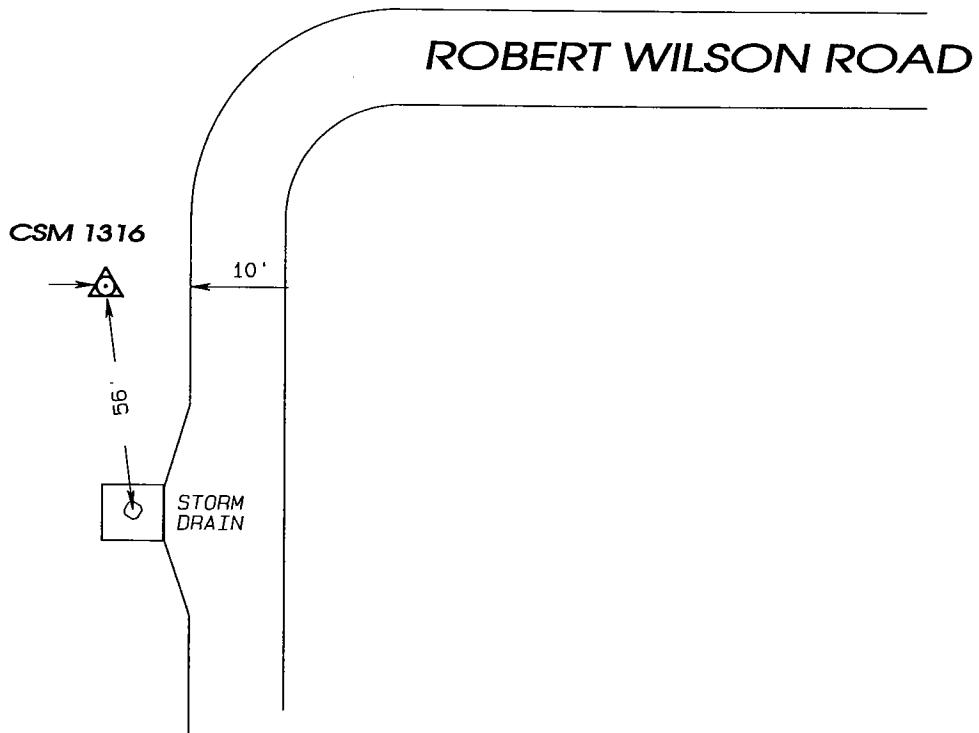
CSM 1216

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



NEIMAN - MARCUS



GENERAL LOCATION:

The marker is located south of the intersection of Robert Wilson Road and Neiman-Marcus Drive, on the west side of the street.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 145, 377.065
North.	6, 872, 747.287
Elev.	347.63
Convergence	2° 04.893'
Scale Factor	0.99992503

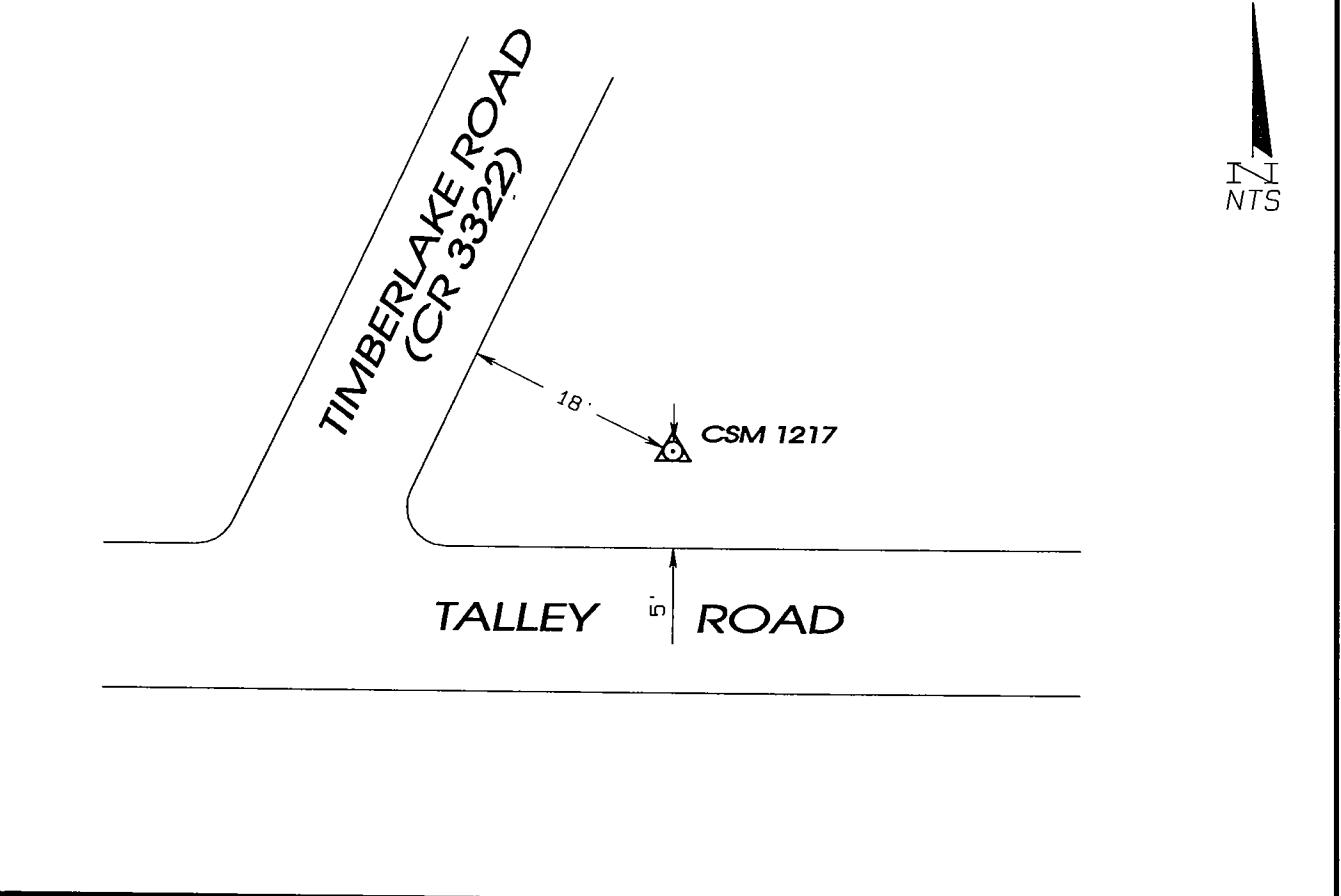
GEODETIC POSITION:

Lat.	32° 27' 46.62558" N
Lon.	94° 41' 00.24025" W

CSM 1316
AZIMUTH MARKER FOR CSM 1216

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on Tally Road, at the intersection of Tally and Timberlake Road (CR 3322) on the north side of the pavement.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 157, 422.996
North.	6, 860, 591.651
Elev.	264.40
Convergence	2°06.123'
Scale Factor	0.99993136

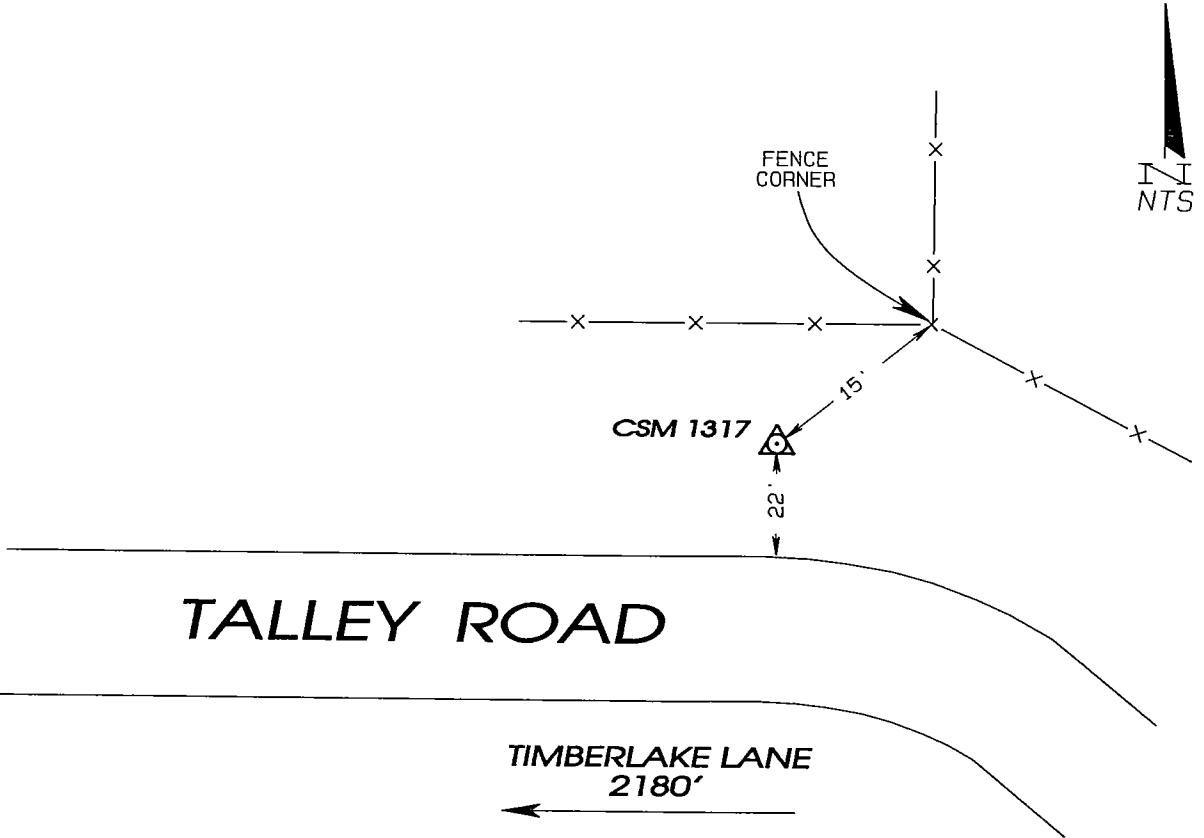
GEODETIC POSITION:

Lat.	32° 25' 42.06838" N
Lon.	94° 38' 44.93661" W

CSM 1217

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on Tally Road, 2180' east of Timberlake Lane.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 159, 548.781
North.	6, 860, 099.492
Elev.	257.74
Convergence	2° 06.346'
Scale Factor	0.99993166

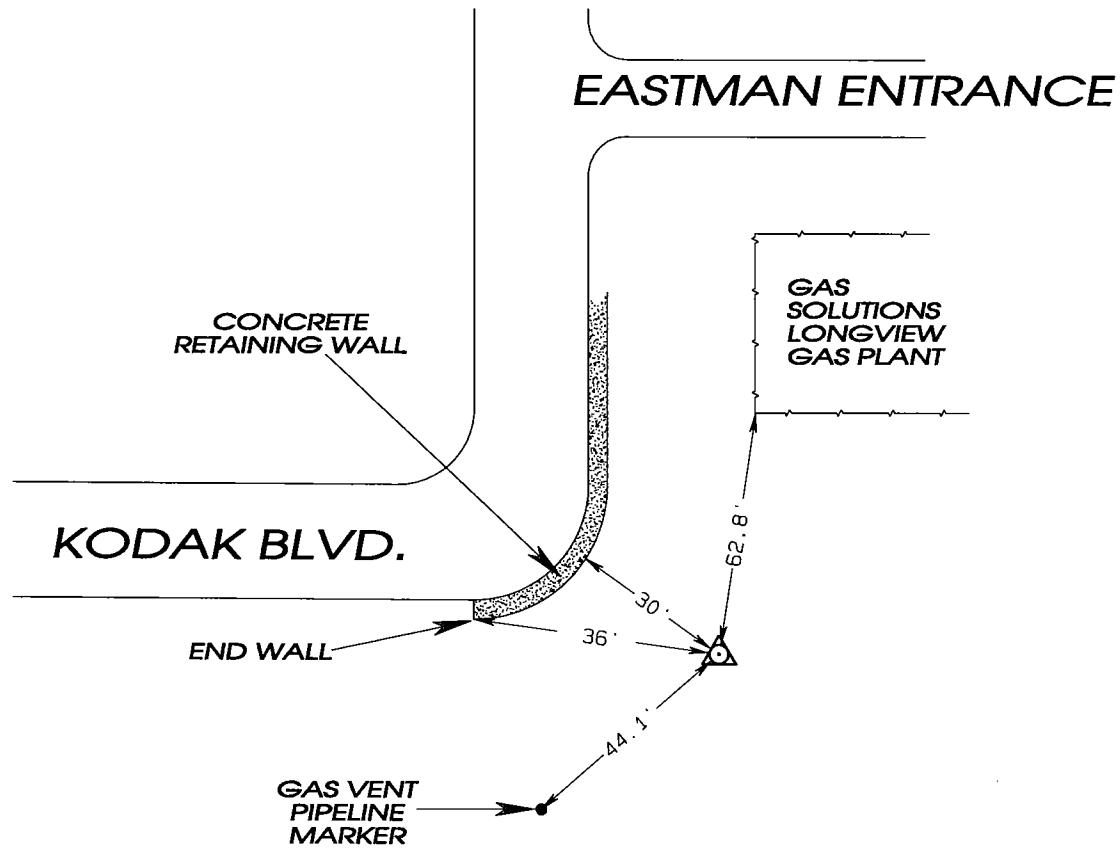
GEODETIC POSITION:

Lat.	32° 25' 36.42923" N
Lon.	94° 38' 20.36142" W

CSM 1317
AZIMUTH MARKER FOR CSM 1217

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is south of the Eastman Entrance behind the concrete barrier for the curve in Kodak Bulv.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

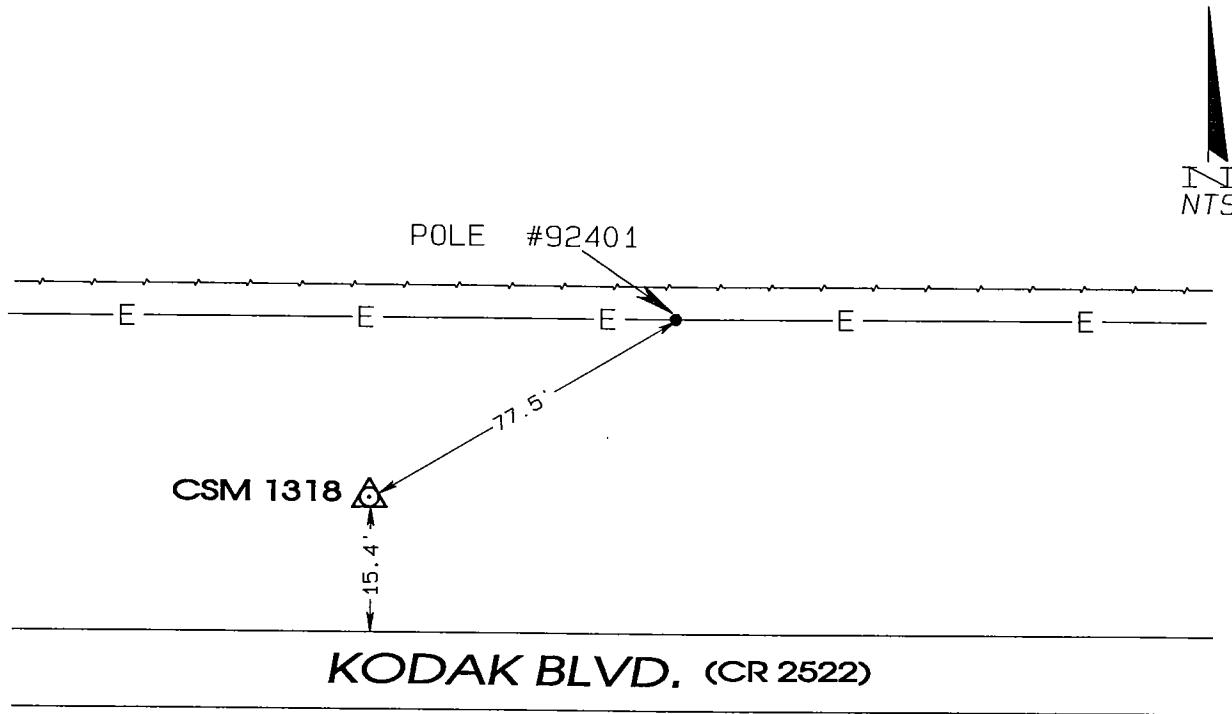
East.	3, 139, 815.983
North.	6, 862, 646.259
Elev.	288.85
Convergence	2°04.265'
Scale Factor	0.99992998

GEODETIC POSITION:

Lat.	32° 26' 08.72995" N
Lon.	94° 42' 09.36874" W

CSM 1218

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on the north side of Kodak Blvd. and approximately 1600' west of the curve at the Texas Eastman Entrance.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 137, 341.084
North.	6, 862, 609.236
Elev.	288.45
Convergence	2° 04.002'
Scale Factor	0.99992995

GEODETIC POSITION:

Lat.	32° 26' 09.24797" N
Lon.	94° 42' 38.24422" W

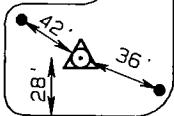
CSM 1318
AZIMUTH MARKER FOR CSM 1218

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



CSM 1219



ASPHALT DRIVE



STATE HIGHWAY 149

TO LONGVIEW



GENERAL LOCATION:

The marker is located on the south side of State Highway 149, and east of FM 322 in front of Citizens National Bank, in Lakeport.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3. 138. 635. 122
North.	6. 855. 000. 148
Elev.	264. 16
Convergence	2°04. 110'
Scale Factor	0. 99993393

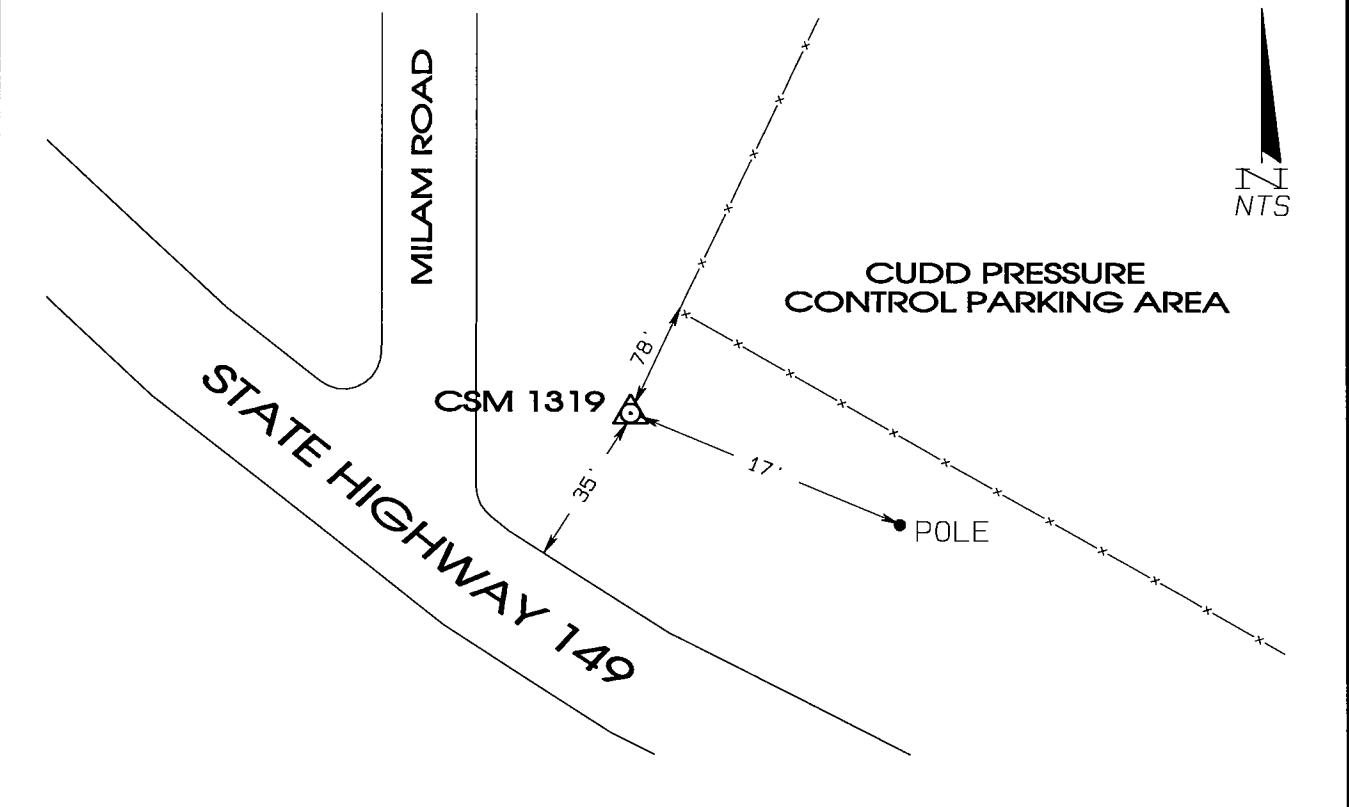
GEODETIC POSITION:

Lat.	32° 24' 53.53909" N
Lon.	94° 42' 26.35913" W

CSM 1219

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on the north side of State Highway 149, and south of the intersection with Milam Road, in front of CUDD Pressure Controls, south of Longview.

Marker is an aluminum cap in concrete imprinted "STATE DEPT. OF HWYS. AND PUBLIC TRANS. - SURVEY MONUMENT" and field stamped "AZ.MK." this marker is an "azimuth marker" to a Satellite Station which is located at the intersection of SH 149 and SH 322 and is presently unsuitable for GPS observations.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", 4F4 A 1994', 'FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 140, 694.768
North.	6, 853, 322.054
Elev.	292.63
Convergence	2° 04.322'
Scale Factor	0.99993486

GEODETIC POSITION:

Lat.	32° 24' 36.20804" N
Lon.	94° 42' 03.05503" W

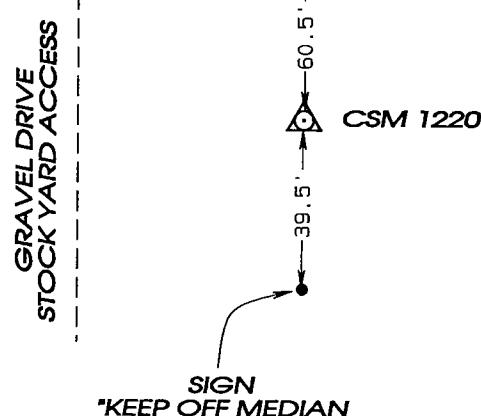
CSM 1319
AZIMUTH MARKER FOR CSM 1219

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



INTERSTATE HIGHWAY 20 (WEST BOUND LANE)



GENERAL LOCATION:

The marker is located west of the Estes Parkway overpass, and west of the Sabine River Bridge, approximately 2000 feet, in the ceter median.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet,

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 119, 417, 655
North.	6, 860, 435, 120
Elev.	277.60
Convergence	2°02.094'
Scale Factor	0.99993074

GEODETIC POSITION:

Lat.	32° 25' 54.09473" N
Lon.	94° 46' 08.15537" W

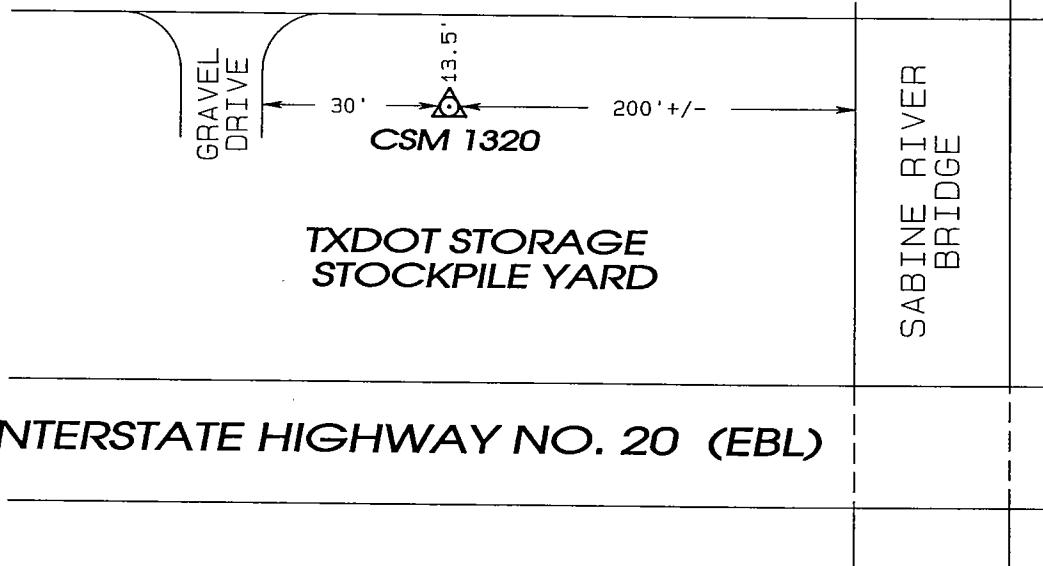
CSM 1220

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



INTERSTATE HIGHWAY NO. 20 (WBL)



INTERSTATE HIGHWAY NO. 20 (EBL)

GENERAL LOCATION:

The marker is located in the median of Interstate Highway 20, just west of the Sabine River Bridge, approximately 200'.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 121, 936.289
North.	6, 860, 990.376
Elev.	276.24
Convergence	2° 02.363'
Scale Factor	0.99993050

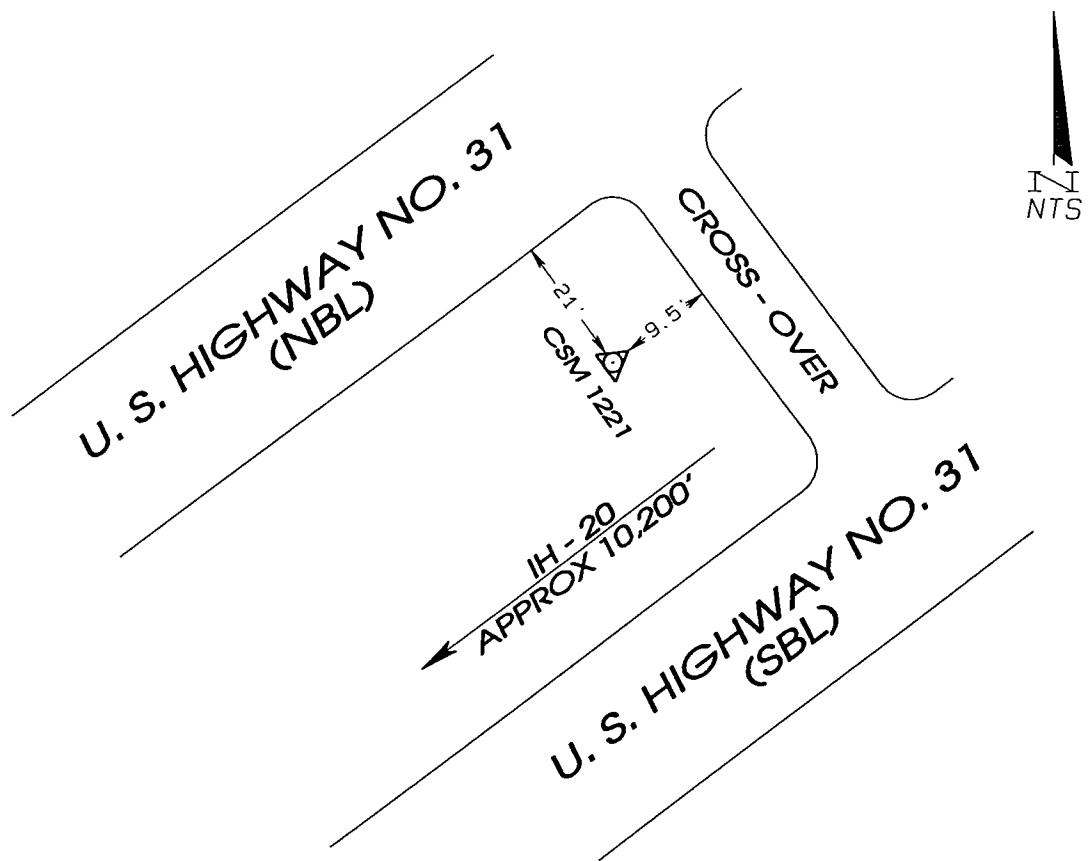
GEODETIC POSITION:

Lat.	32° 25' 58.69985" N
Lon.	94° 45' 38.55576" W

CSM 1320
AZIMUTH MARKER FOR CSM 1220

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



NTS

GENERAL LOCATION:

The marker is located in the median of State Highway No. 31 north of Interstate Highway 20, at the crossover just north of Oakwood Mobilehome Sales.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3, 108, 590.040
North. 6, 868, 016.510

Elev. 264.31

Convergence 2°00.975'

Scale Factor 0.99992671

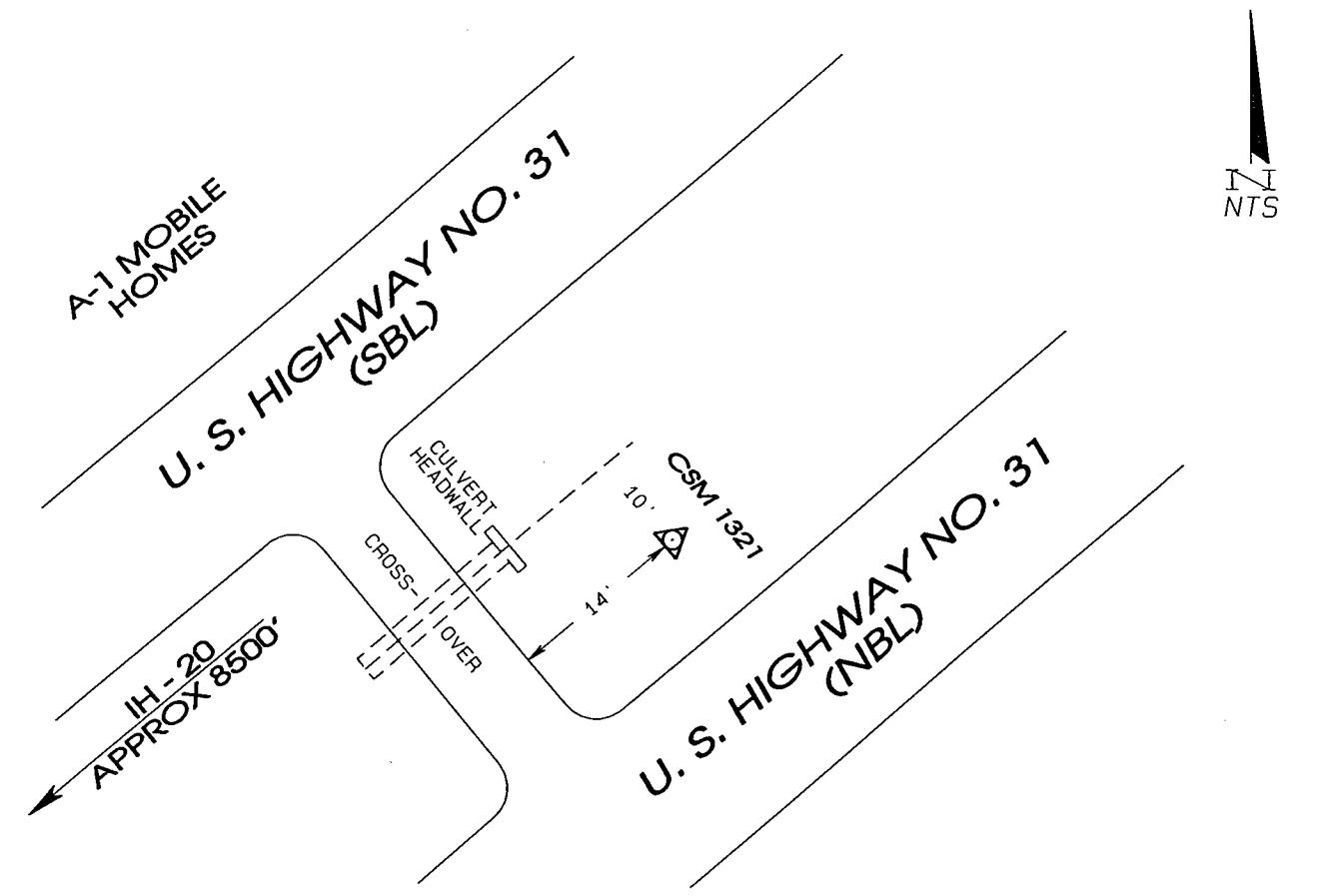
GEODETIC POSITION:

Lat. 32° 27' 12.85681" N
Lon. 94° 48' 11.30255" W

CSM 1221

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located in the center median of US Highway 31, south of the Sabine River Bridge, at the crossover just south of the MAC Truck Sales.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

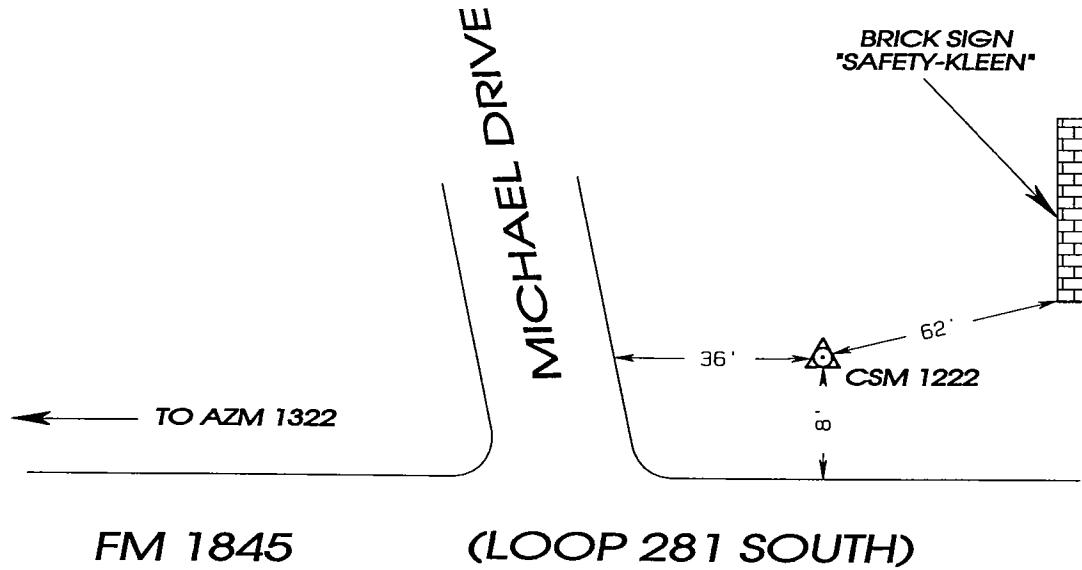
East.	3, 107, 433.826
North.	6, 866, 951.745
Elev.	265.33
Convergence	2° 00.848'
Scale Factor	0.99992722

GEODETIC POSITION:

Lat.	32° 27' 02.72924" N
Lon.	94° 48' 25.22510" W

CSM 1321
AZIMUTH MARKER FOR CSM 1221

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is east of Michael Drive and north of FM 1845 in front of Safety-Kleen.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet,

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

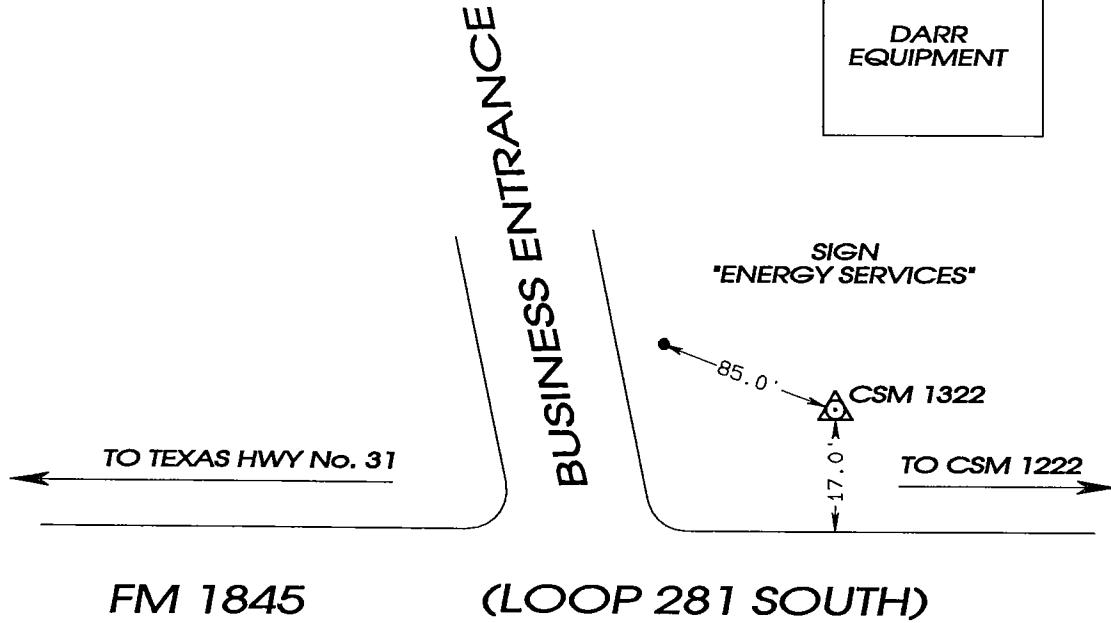
East. 3, 123, 223.824
North. 6, 872, 655.723
Elev. 266.39
Convergence 2°02.544°
Scale Factor 0.99992469

GEODETIC POSITION:

Lat. 32° 27' 53.60766" N
Lon. 94° 45' 18.69102" W

CSM 1222

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on the north side of FM 1845 in front of DARR Equipment Company.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 121, 632.209
North.	6, 873, 482.639
Elev.	283.08
Convergence	2° 02.378'
Scale Factor	0.99992426

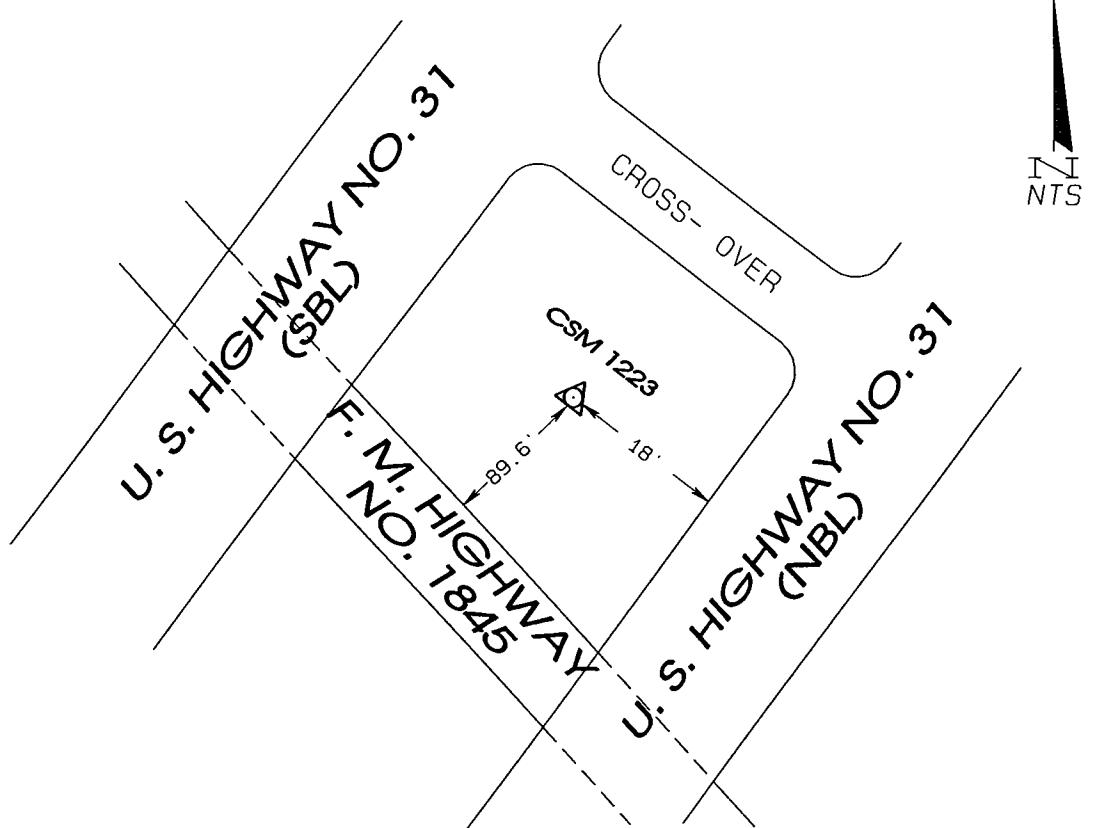
GEODETIC POSITION:

Lat.	32° 28' 02.34618" N
Lon.	94° 45' 36.91377" W

CSM 1322
AZIMUTH MARKER FOR CSM 1222

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located in the median of State Highway 31, just north of the FM 1845 overpass, close to the guard rail.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet,

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 119, 128.298
North.	6, 877, 655.867
Elev.	328.08
Convergence	2°02.128'
Scale Factor	0.99992221

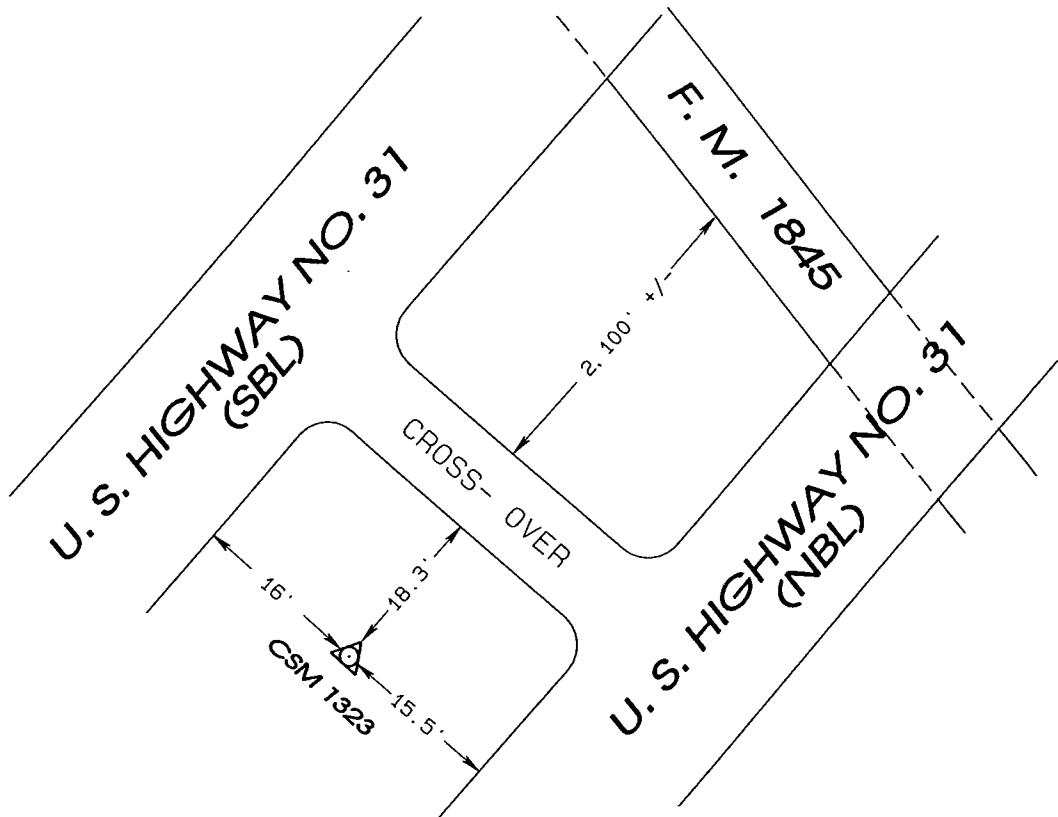
GEODETIC POSITION:

Lat.	32° 28' 44.49735" N
Lon.	94° 46' 04.39269" W

CSM 1223

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located in the center median of US Highway 31, south of the intersection of US 31 and FM 1845, at the crossover south of the convenience store.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 117, 793.868
North.	6, 875, 696.856
Elev.	291.56
Convergence	2° 01.980'
Scale Factor	0.99992312

GEODETIC POSITION:

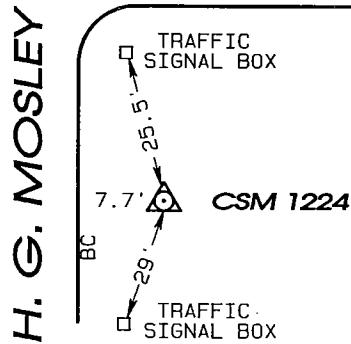
Lat.	32° 28' 25.59283" N
Lon.	94° 46' 20.77273" W

CSM 1323
AZIMUTH MARKER FOR CSM 1223

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

N
NTS

U.S.HIGHWAY NO. 80 (WEST MARSHALL)



GENERAL LOCATION:

The marker is located at the intersection of US Highway 80 and H.G. Mosley, on the south east corner of the intersection.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,116,521.754
North.	6,886,984.087
Elev.	324.06
Convergence	2°01.887'
Scale Factor	0.99991783

GEODETIC POSITION:

Lat.	32° 30' 17.66218" N
Lon.	94° 46' 30.94283" W

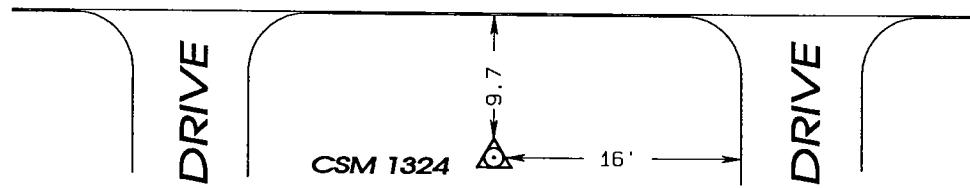
CSM 1224

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

**VOYLES
AUTO SALES**

N
NTS

**U. S. HIGHWAY NO. 80
(WEST MARSHALL)**



**LONGVIEW
AUTO PARTS**

GENERAL LOCATION:

The marker is located on the south side of US Highway 80, just west of the intersection of SH 300, (Gilmer Road), in front of Longview Automotive.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

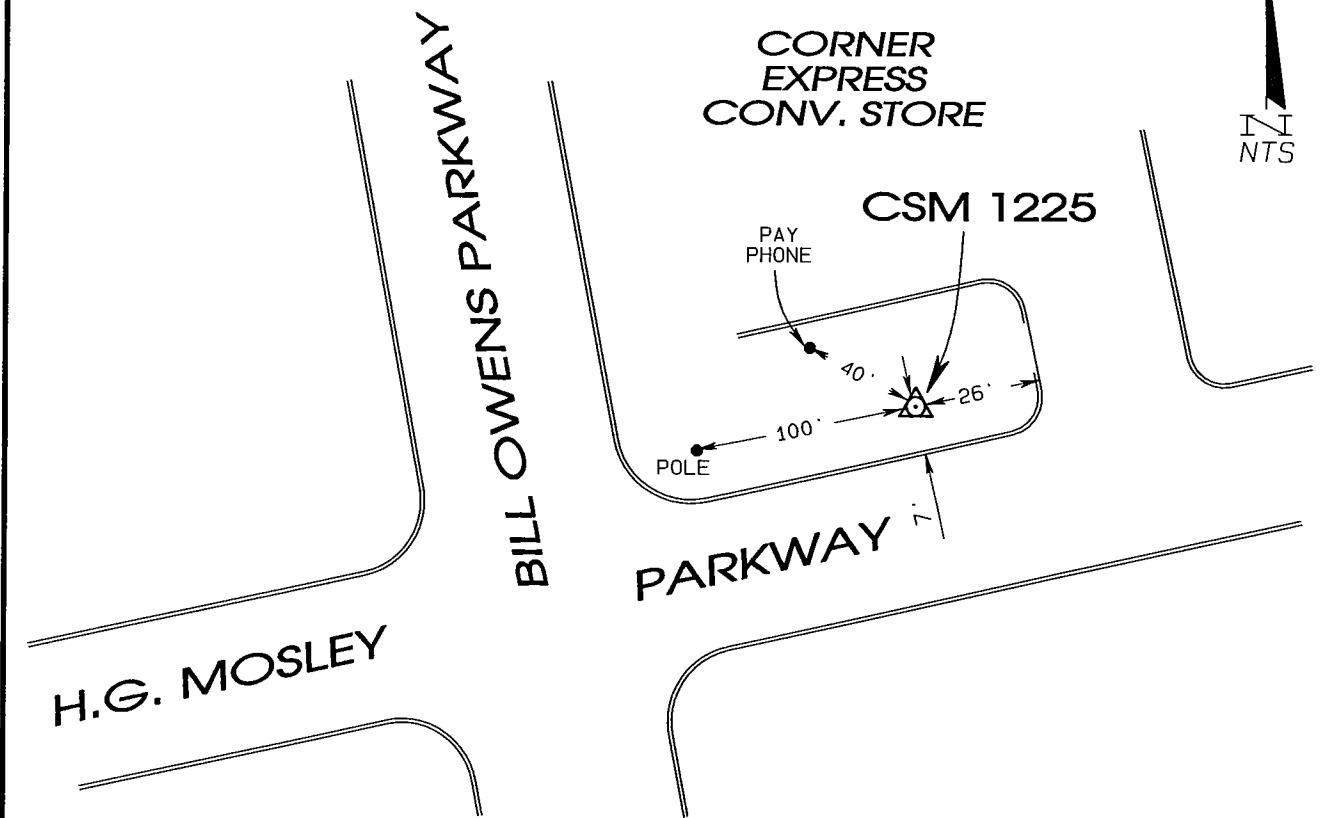
East.	3. 118. 164. 086
North.	6. 886. 733. 659
Elev.	316. 11
Convergence	2° 02. 060'
Scale Factor	0. 99991797

GEODETIC POSITION:

Lat.	32° 30' 14.60912" N
Lon.	94° 46' 11.88008" W

CSM 1324
AZIMUTH MARKER FOR CSM 1224

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located east of intersection of H.G. Mosley and Bill Owens Parkway, approximately 100', and on the north side of the pavement.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 119, 920.270
North.	6, 894, 097.508
Elev.	326.05
Convergence	2°02.274'
Scale Factor	0.99991472

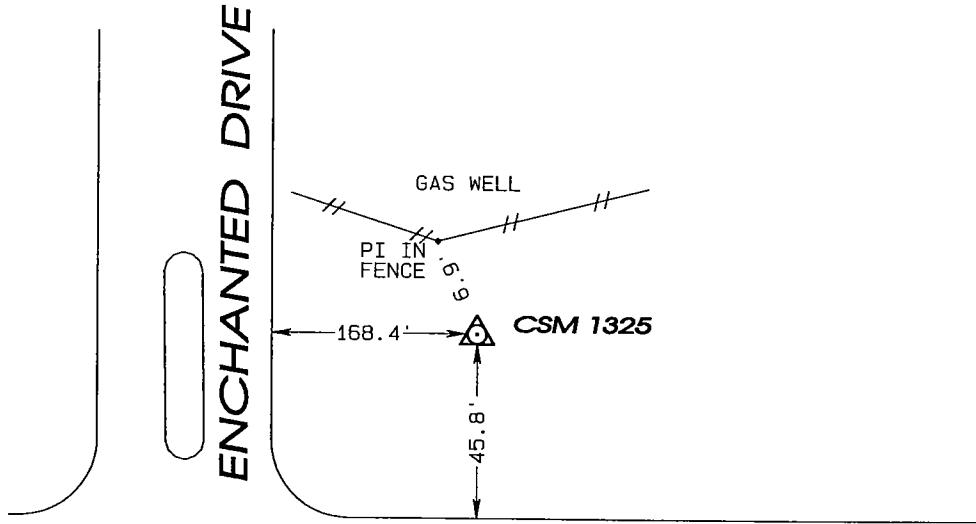
GEODETIC POSITION:

Lat.	32° 31' 26.81491" N
Lon.	94° 45' 48.32713" W

CSM 1225

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



H. G. MOSLEY PARKWAY

GENERAL LOCATION:

The marker is located near the entrance of Wild Wood Addition, at the intersection of H.G. Mosley and Enchanted Drive, near the angle point of a wood privacy fence.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 118, 758.973
North.	6, 893, 356.038
Elev.	341.46
Convergence	2° 02.148'
Scale Factor	0.99991502

GEODETIC POSITION:

Lat.	32° 31' 19.89074" N
Lon.	94° 46' 02.19043" W

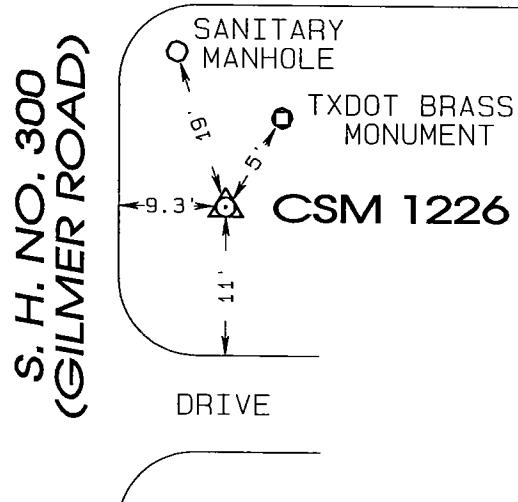
CSM 1325
AZIMUTH MARKER FOR CSM 1225

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

NTS

BLUERIDGE PARKWAY



GENERAL LOCATION:

The marker is located on the east side of State Highway 300, (Gilmer Rd.) at the intersection of SH 300, and Blueridge Parkway.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3, 111, 125.660
North. 6, 899, 256.725
Elev. 412.82
Convergence 2° 01.361°
Scale Factor 0.99991235

GEODETIC POSITION:

Lat. 32° 32' 20.91928" N
Lon. 94° 47' 28.85916" W

CSM 1226

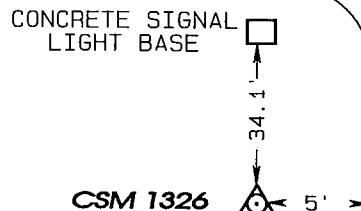
CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

N
NTS

EVERGREEN STREET

DOLLAR
GENERAL



S. H. NO. 300
(GILMER ROAD)

GENERAL LOCATION:

The marker is located at the intersection of State Highway 300 and Evergreen Street, north of Loop 281, on the south west corner of the intersection.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4"aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100, 000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

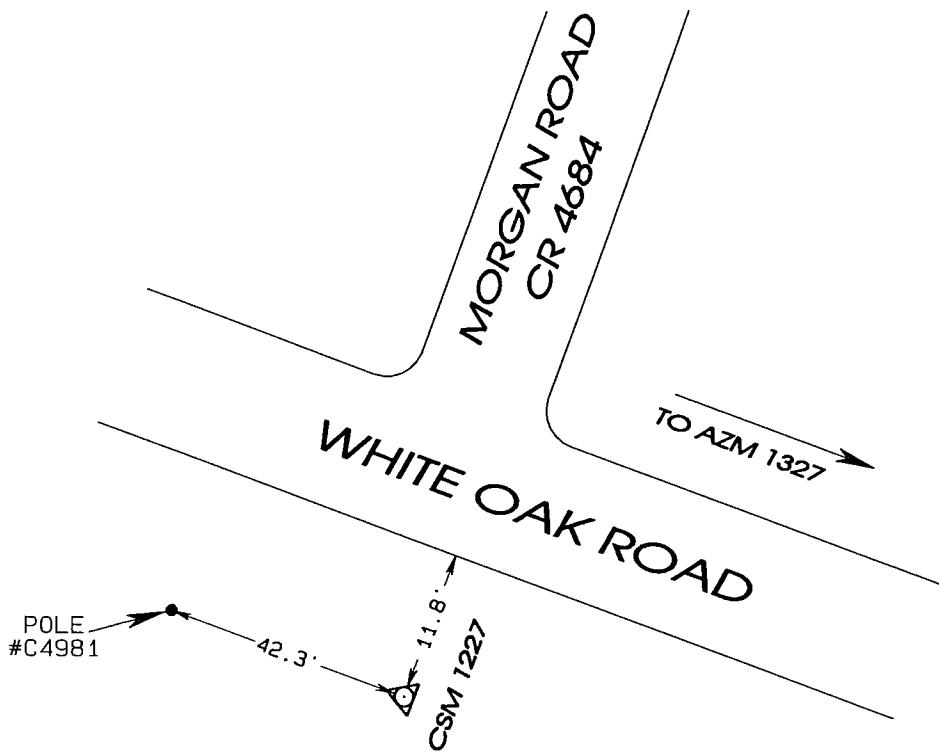
East.	3, 111, 861, 355
North.	6, 897, 108, 347
Elev.	405.60
Convergence	2° 01.431'
Scale Factor	0.99991328

GEODETIC POSITION:

Lat.	32° 31' 59.41615" N
Lon.	94° 47' 21.15633" W

CSM 1326
AZIMUTH MARKER FOR CSM 1226

CITY SURVEY MARKER - SITE SKETCH
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of FM 2275, George Richie Road, on White Oak Road, across from Morgan Road, in front of a residence.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.
Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,085,147.076
North.	6,909,628.306
Elev.	446.42
Convergence	1° 58.642
Scale Factor	0.99990770

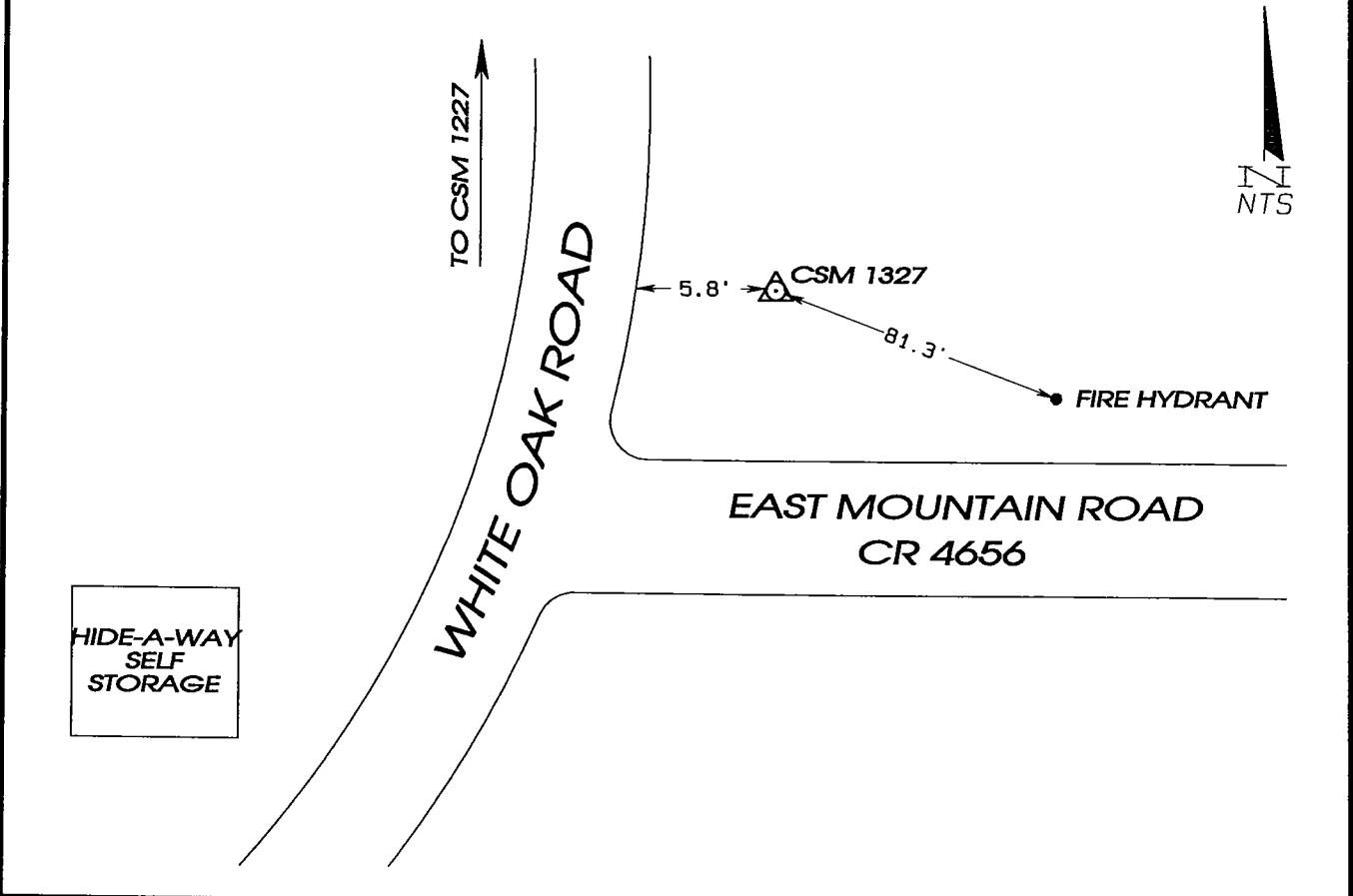
GEODETIC POSITION:

Lat.	32° 34' 12.46089" N
Lon.	94° 52' 27.98452" W

CSM 1227

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of George Richie Road on White Oak Road and north of East mountain Road, in front of native stone fence.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3, 087, 230. 370
North.	6, 908, 851. 436
Elev.	418.07
Convergence	1° 58.860'
Scale Factor	0.99990804

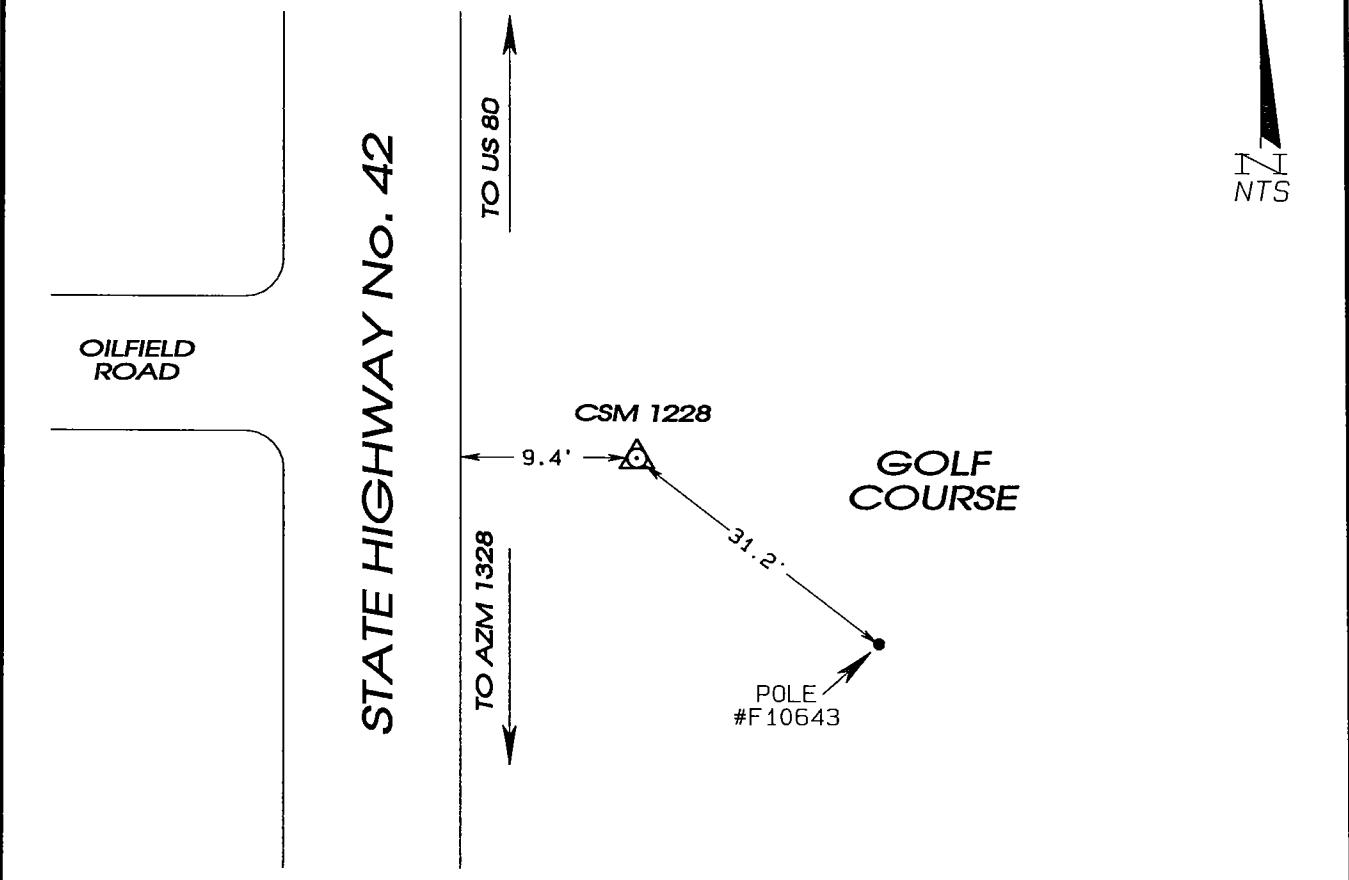
GEODETIC POSITION:

Lat.	32° 34' 04.06595" N
Lon.	94° 52' 03.96699" W

CSM 1327
AZIMUTH MARKER FOR CSM 1227

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is on the east side of State Highway 42 south of US 80 and south of the railroad, near the golf course.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,093,493.608
North.	6,880,705.769
Elev.	319.36
Convergence	1° 59.421
Scale Factor	0.99992035

GEODETIC POSITION:

Lat.	32° 29' 23.56919" N
Lon.	94° 51' 02.24264" W

CSM 1228

CITY SURVEY MARKER - SITE SKETCH

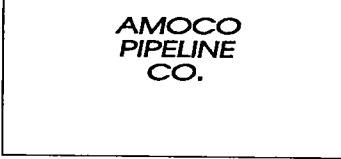
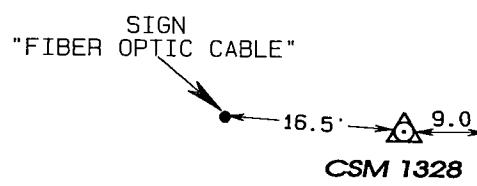
CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

TO CSM 1228
TO US 80

N
NTS

MERRILL LAKE ROAD

HARRISON ROAD
FM 2206



STATE HIGHWAY No. 42

GENERAL LOCATION:

The marker is south of Harrison Road north of the Amoco Pipeline Co. driveway. For reference .5 mile north of Sabine River bridge on State Highway No. 42.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,093,588.396
North.	6,877,430.762
Elev.	303.48
Convergence	1° 59.419'
Scale Factor	0.99992189

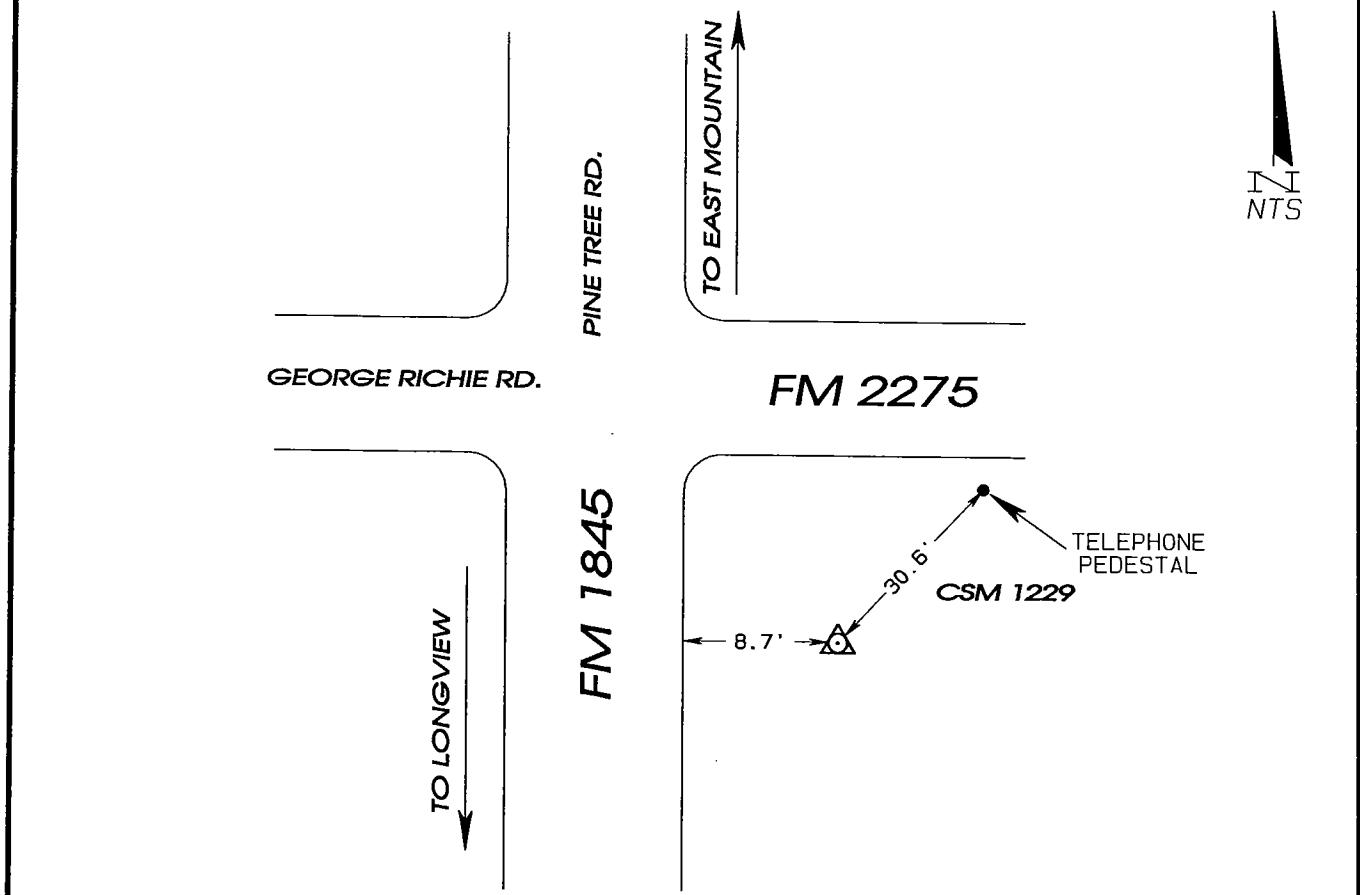
GEODETIC POSITION:

Lat.	32° 28' 51.14821" N
Lon.	94° 51' 02.46463" W

CSM 1328
AZIMUTH MARKER FOR CSM 1228

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located on the south east corner of the intersection of FM 2275 (George Richie Road) and FM 1845 (Pine Tree Road)

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East. 3,098,555.396
North. 6,905,169.266
Elev. 400.17
Convergence 2° 00.049
Scale Factor 0.99990970

GEODETIC POSITION:

Lat. 32° 33' 23.75759" N
Lon. 94° 49' 53.20630" W

CSM 1229

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK

N
T
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NTS

POLE #A3025



FM 1845

PINE TREE ROAD

TO CSM 1229

GENERAL LOCATION:

The marker is located north of the intersection of FM 1845 and George Richie Road, past the bridge and in front of a brick house.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,095,668.224
North.	6,908,799.119
Elev.	388.56
Convergence	1° 59.755'
Scale Factor	0.99990818

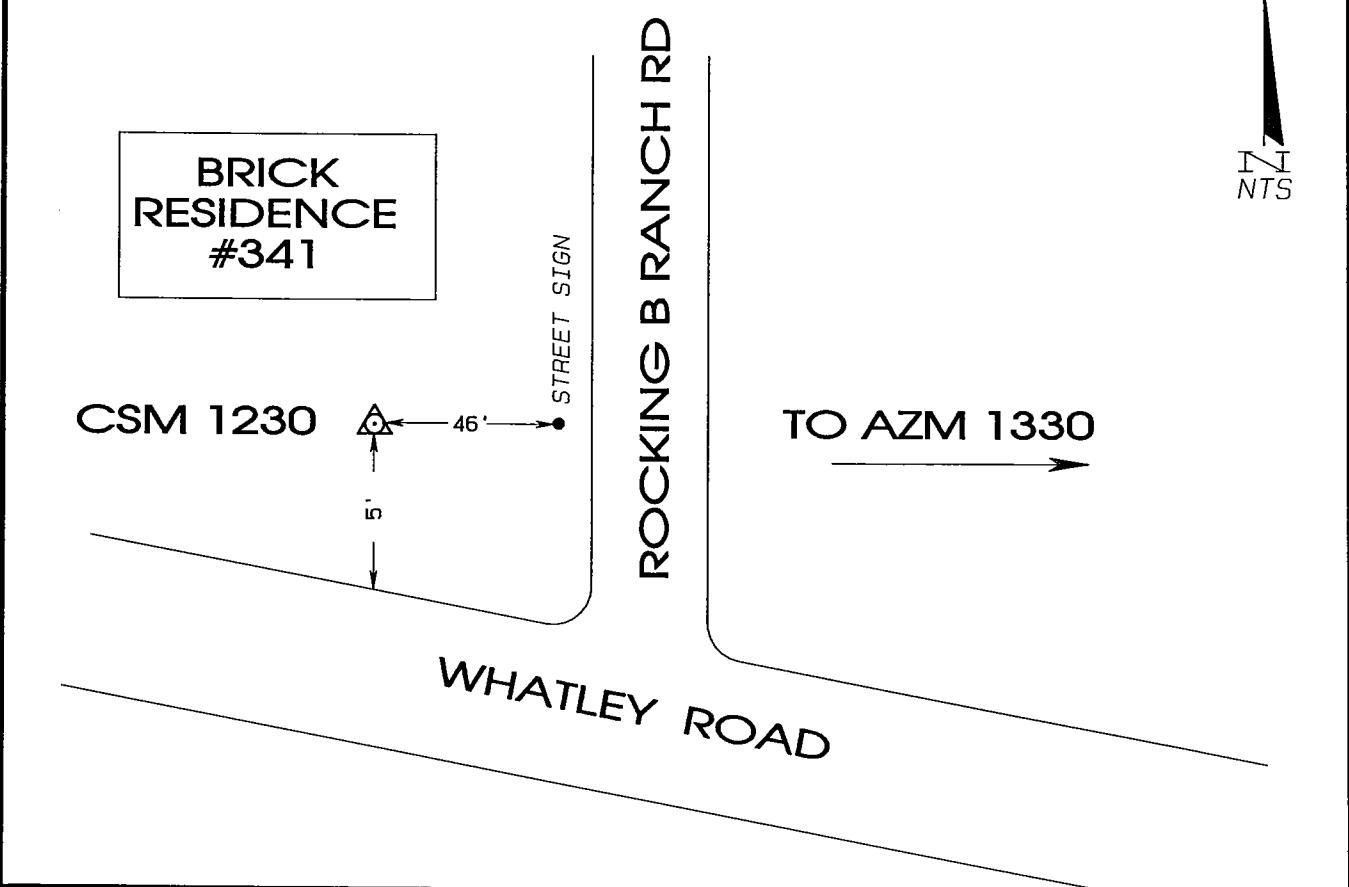
GEODETIC POSITION:

Lat.	32° 34' 00.65135" N
Lon.	94° 50' 25.44375" W

CSM 1329
AZIMUTH MARKER FOR CSM 1229

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of US Highway 80 in White Oak, on Whatley Road north of Rocking B Ranch Road, in front of a brick residence, house No. 341.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,097,656.863
North.	6,893,600.480
Elev.	351.90
Convergence	1° 59.910
Scale Factor	0.99991459

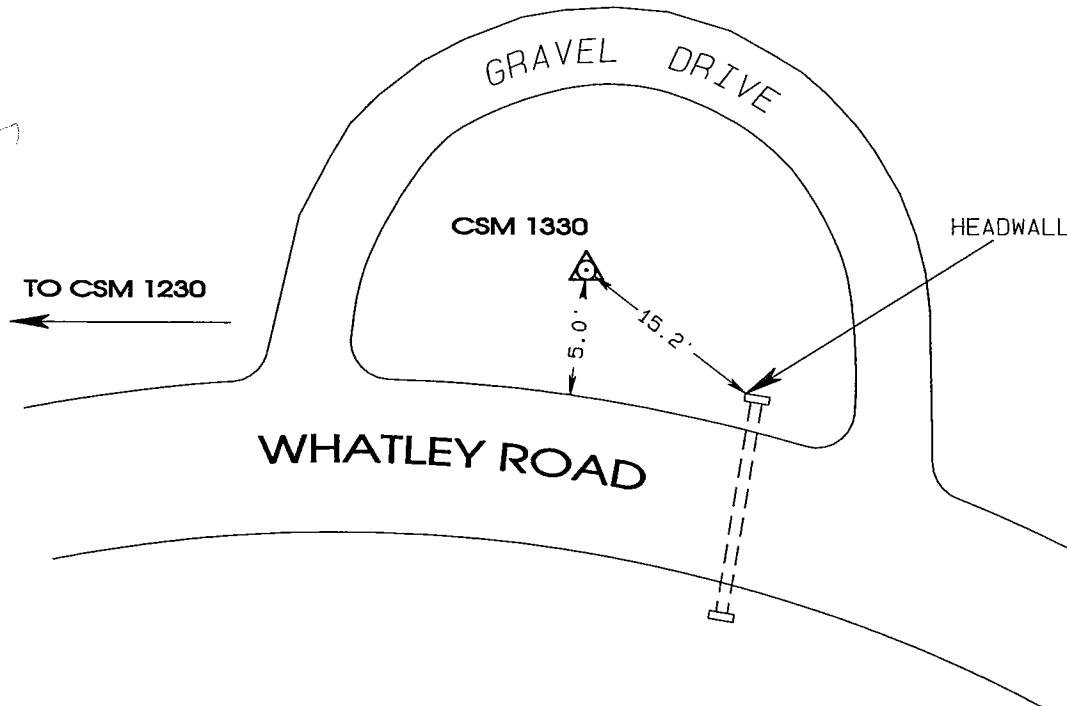
GEODETIC POSITION:

Lat.	32° 31' 29.65821" N
Lon.	94° 50' 08.41282" W

CSM 1230

CITY SURVEY MARKER - SITE SKETCH

CITY OF LONGVIEW
2002 HORIZONTAL & VERTICAL CONTROL NETWORK



GENERAL LOCATION:

The marker is located north of US Highway 80 in White Oak on Whatley Road south of Rocking B Ranch Road, on the east side of the pavement.

Marker is a 5/8" x 5' rebar placed in concrete with a 3-1/4" aluminum cap imprinted CITY OF LONGVIEW, TEXAS - 2002 - SURVEY MARKER - JOHNSON & PACE, and field stamped with the marker number.

Horizontal Datum is the Texas Coordinate System of 1983, North Central Zone, (which is based upon NAD 83), and referenced to NGS Stations: "FAA 07F A 1994", "FAA GGG A", "4F4 A 1994", "FAA ASL A 1994" and "FAA F12 A 1994".

Horizontal Accuracy is within a tolerance of 1 foot in 100,000 feet.

Vertical Datum is NAVD 88 and referenced to NGS Station: E-160.

Vertical Accuracy is within a tolerance of +/- 0.10 foot.

GRID POSITION:

East.	3,098,601.786
North.	6,893,217.064
Elev.	355.93
Convergence	2° 00.009'
Scale Factor	0.99991477

GEODETIC POSITION:

Lat.	32° 31' 25.54020" N
Lon.	94° 49' 57.53885" W

CSM 1330
AZIMUTH MARKER FOR CSM 1230